

PARK FACILITY STANDARDS MANUAL



City of Alexandria, Virginia
Department of Recreation, Parks and Cultural Activities

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INTRODUCTION

The City of Alexandria Park System is comprised of 587 acres of City owned public parkland. The City's Department of Recreation, Parks and Cultural Activities is responsible for the System's planning, management and maintenance. The park system provides a variety of active and passive facilities including athletic fields, playgrounds, recreation courts, trails, picnic areas, marina, pools, natural areas and dog exercise areas.

The Park Facility Standards Manual (Standards) establishes minimum design, construction and performance expectations for the City's park features. The intent of the Standards is to inform and guide park and open space planning, capital improvements and capital maintenance and to sustain life-cycle resource investments in public space. The Standards are a reference instrument for selection of materials, fixtures, and systems. The Standards integrate City criteria, industry standards and applicable Federal/State/City requirements into a primary-single source document. Anticipated benchmarks for performance, function, safety, environmental impact, and anticipated maintenance/life-cycle resource needs are established by each Standard.

Established in Summer 2012, the Park Facility Standards Manual is a living document that is updated and re-evaluated coincident with advancements in industry, changes in the City's park and open space system, and recreational needs.

The 2021 update of the Park Facility Standards Manual included a review and revision of each standard to reflect current industry trends and technological advancements. Many new standards were added during the update, such as LED lighting options and permeable surfaces.

USER GUIDE

This manual supplements industry standards, and federal/state/local requirements, while identifying City of Alexandria Park Facilities requirements. Information in this manual is not intended to replace or function as specifications, construction documents, or contract documents.

The standards are organized according to nine categories: Site Furnishings, Fences and Walls, Surfacing, Park Structures, Playgrounds, Ball Courts and Athletic Fields, Utility Systems, Signs and Marina Facilities and Waterfront.

The following expectations apply to each Standard:

Principle Life Cycle Expectations

Materials shall be procured in compliance with City of Alexandria Procurement procedures.

Materials and products shall be recyclable or its components shall have the potential for re-use at the end of an item's useful life.

Products and replacement parts shall be proven reliable. Products subject to continual re-design as a result of product or material failure, or outdated design shall not be used.

Replacement parts, if applicable, shall be readily available throughout the life cycle of the product.

Materials and products shall be selected and installed in a manner that is sensitive to context and to the City of Alexandria Maintenance Standards.

Principle Implementation Expectations

Installation of products and materials identified in the following pages shall be performed consistent with regulatory requirements including permits, permissions, etc.

Installation of products and materials shall comply with manufacturer's recommendations unless otherwise identified.

SECTION TEMPLATE

Data

Each Standard sheet is organized consistent with a template on the following pages. Standards will begin on the right hand page and continue on a second page if necessary. All requirements of the Standard shall be addressed.

Information is arranged under the headings of purpose, general information, materials and finish, features, installation and life cycle expectations as needed for each specific Standard.

Imagery

Images are the property of the Department of Recreation, Parks and Cultural Activities unless otherwise identified.

SECTION TEMPLATE

Purpose

Scope and Function of Each Facility or Component

General Information

Local/State/Federal Requirements

Special Conditions/Considerations

Preferred Manufacturer/Make/Model and Contact Information, if Applicable

Related Sections, if Applicable

Design Criteria, if Applicable

Materials and Finish

Material/Treatment

Fabrication Requirements

Color Requirements

Features

Components

Extras/Options

Installation

Method/Type

Specific/Seasonal/Site Requirements

Life Cycle Expectations

Warranty Requirements

Specific/Seasonal/Site Requirements

Image Footnotes

Source Data as Needed

SECTION TEMPLATE

01

Image

Image caption (Footnote)

Image

Image caption (Footnote)

Image

Image caption (Footnote)

STANDARDS AND ABBREVIATIONS

Standards shall comply with the most current and up-to-date standards, guidelines, and governing organizations cited in this document. If referenced standards conflict, the final determination of precedence shall be made by the Director of Recreation, Parks and Cultural Activities.

- ADA Standards for Accessible Design. As published by the Department of Justice; Washington, D.C.
- American Association of State Highway and Transportation Officials (AASHTO).
- American National Standards Institute (ANSI).
- American Society of Civil Engineers (ASCE).
- American Society of Testing and Materials (ASTM). As published by ASTM International; West Conshohocken, PA.
- Architectural Barriers Act.
- City Charter and Code. City of Alexandria, Virginia.
- Code of Virginia. Commonwealth of Virginia.
- Commonwealth of Virginia Sanitary Regulations for Marinas and Boat Moorings. Commonwealth of Virginia.
- Consumer Product Safety Commission (CPSC).
- Illuminating Engineering Society of North America (IESNA)
- Design Guidelines for the Old and Historic Alexandria and the Parker-Gray District. City of Alexandria, Virginia.
- Four Mile Run Design Guidelines. City of Alexandria, Virginia, Arlington County, Virginia and Northern Virginia Regional Commission.
- Landscape Guidelines. City of Alexandria, Virginia.
- National Collegiate Athletic Association.
- National Federation of State High Schools (NFSHS).
- Virginia Clean Marina Guidelines. Commonwealth of Virginia.
- Virginia Department of Health. Commonwealth of Virginia.
- Virginia Department of Transportation (VDOT).
- Virginia Uniform Statewide Building Code (USBC).
- Zoning Ordinance of the City of Alexandria, Virginia. City of Alexandria, Virginia.

CHAPTER 2

SITE FURNISHINGS

Athletic Equipment | Badminton Net Systems
Athletic Equipment | Base Plates
Athletic Equipment | Basketball Goal Systems
Athletic Equipment | Foul Pole
Athletic Equipment | Futsal Goal
Athletic Equipment | Field Hockey Goal
Athletic Equipment | Lacrosse Goal
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Drinking Fountain
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Lighting | Athletic Facilities
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Lighting | Ground Recessed
Lighting | Historic Pole
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Movable Furnishings
Picnic Table | Option 1
Picnic Table | Option 2
Plaques | Adopt-A-Bench
Receptacle | Recycling
Receptacle | Trash
Wheel Stop

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BADMINTON NET SYSTEMS

02

Purpose

Badminton net systems shall be provided at outdoor sand and grass badminton facilities.

General Information

Net systems shall comply with National Collegiate Athletic Association standards or other governing authority.

Related Standards: Court Diagram | Badminton

Materials and Finish

Post size shall be 3½" inches minimum with ⅜" wall thickness aluminum with a powder coated black finish.

Netting shall be 4 inch square black mesh No. 24 nylon fabric, with vinyl coated steel top cables. Headband shall be 2 inch white vinyl-coated nylon.

Features

Systems shall have a heavy duty net tensioning reel with removable handle.

Installation

Posts shall be installed in ground with concrete footers. Footers shall be covered with 1 foot minimum vertical depth sand or top soil.

Life Cycle Expectations

A 2 year warranty is required for posts.

Nets are anticipated to require replacement annually with normal and ordinary use.

Posts are anticipated to require replacement after 10 years of normal and ordinary use.



Badminton Net System

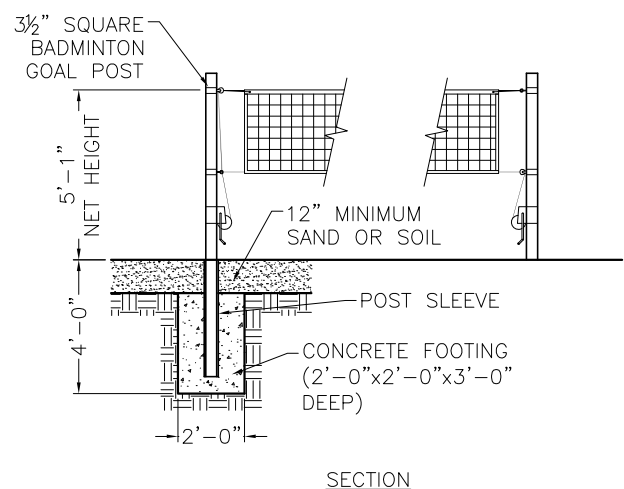


Image Footnotes

(1) <https://douglas-sports.com/product/vbs-3-5-sq-outdoor-power-volleyball-system-3-5-sq-steel-black>

Badminton Net System

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BASE PLATES

02

Purpose

Ball field base equipment shall be provided at diamond fields as needed for play.

General Information

Base plate dimensions shall comply with National Federation of State High Schools or other governing authority.

Base plates shall be anchored in ground per manufacture's recommendation.

Related Standards: Infield Mix, Field Diagram | Baseball, Field Diagram | Softball.

Materials and Finish

Plate color shall be white with black trim.

Double first bases shall include a white base and an orange outside base.

Plates shall be manufactured from durable materials such as rubber, reinforced steel and polyurethane.

Materials shall be rated for exterior use and all-weather play.

Features

Home plate shall have a rubber waffle style interior. Plate shall be waterproof with a non-skid exterior surface.

Pitching rubber shall be four-way, adult size with inner support tubing.

Base plates shall be progressive release.

Base anchors and plugs shall be easily replaceable.

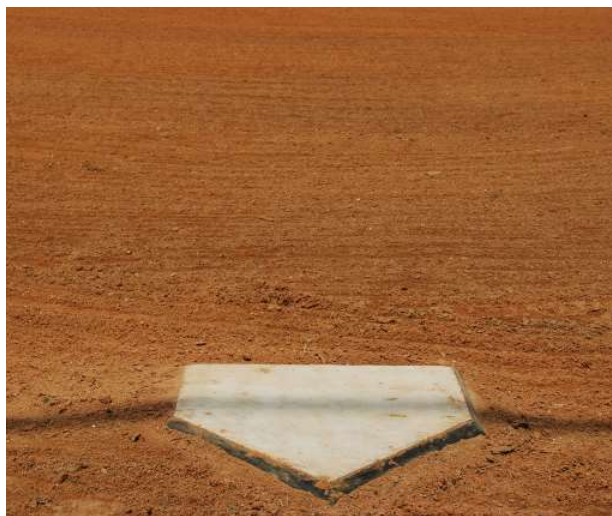
Installation

Locate plates, pitching rubbers and bases in compliance with field layouts.

Life Cycle Expectations

A 1 year minimum warranty is required.

Base plates are anticipated to require replacement after 2 years of normal and ordinary use, and annually for heavily programmed fields.



Base plate



Pitching rubber

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BASKETBALL GOAL SYSTEMS

Purpose

Competition style, heavy duty backstops shall be provided at outdoor basketball facilities.

General Information

Post systems shall comply with National Collegiate Athletic Association regulations or other governing authority.

Related Standards: Court Diagram | Basketball, Court Surfacing.

Materials and Finish

Upright posts and supports shall be 6 inches minimum square structural steel tubing with ¼ inch thick walls.

Steel components shall have a double powder coat finish. Color shall be black.

Square backboard shall be perforated steel and include acrylic official perimeter and target area markings.

Goals shall be a double ⅝ inch diameter solid steel rim, with a continuous net attachment system.

Nets shall be heavy duty, weather resistant nylon fiber. Color shall be white.

Features

Backstop shall provide an extension inside the baseline. The backboard shall be 4 feet outside the baseline and the rim shall be 10 feet above the playing surface.

Post and backboard padding shall be installed when upright posts are located on or within the lined playing surface.

Installation

Install posts consistent with manufacturer's recommendations. Position backstop consistent with NCAA standards.

Post foundation shall be flush to adjacent grade. Top of footing shall be sloped to shed water.

Posts shall be surface mount or embed mount.

Wind loading design shall comply with American Society of Civil Engineers (ASCE) 7-98.

Life Cycle Expectations

A 10 year minimum warranty is required.

Basketball Goal Systems are anticipated to require replacement after 10 years of normal and ordinary use.

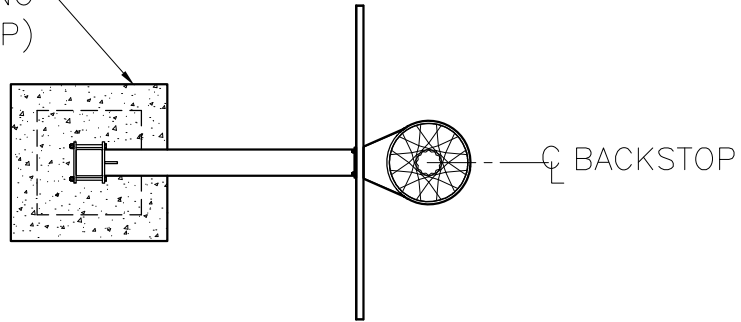
Nets are anticipated to require annual replacement with normal and ordinary use.



Basketball goal

BASKETBALL GOAL SYSTEMS

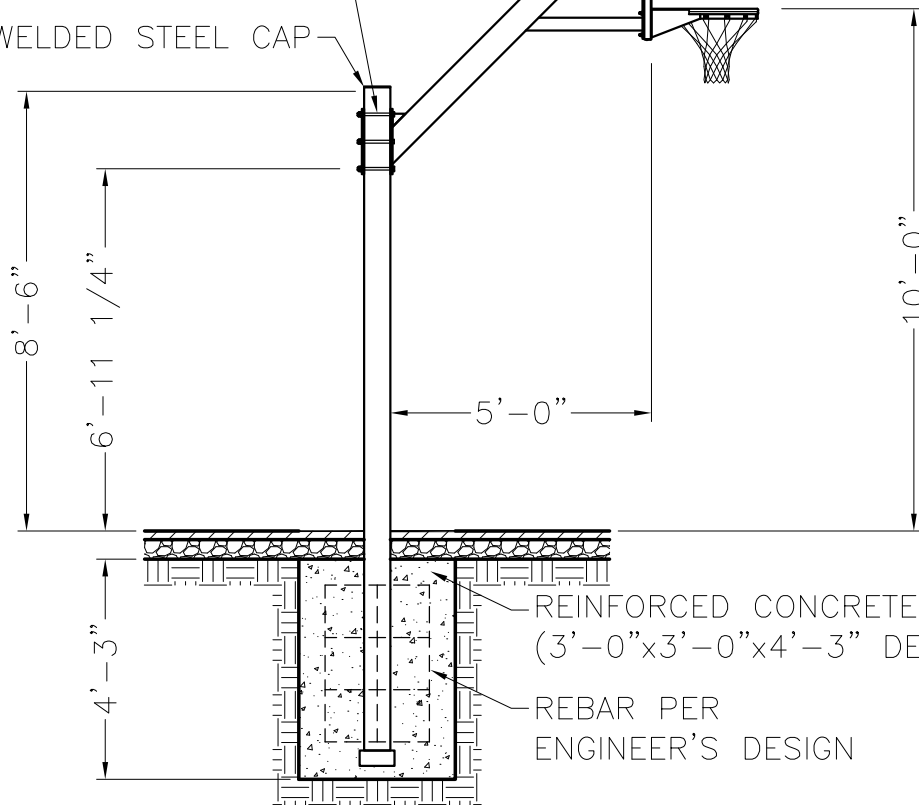
REINFORCED CONCRETE FOOTING
(3'-0"x3'-0"x4'-3" DEEP)



RECTANGULAR STEEL TUBE
EXTENSION WELDMENT

SIX (6) $\frac{5}{8}$ "x8" LONG
(GRADE 5) GALVANIZED
HEX HEAD CAP SCREWS

WELDED STEEL CAP



SECTION

Basketball goal

Not to scale

FOUL POLE

02

Purpose

Foul poles shall be utilized to identify play/foul territory on diamond ball fields.

General Information

Foul poles shall comply with National Collegiate Athletic Association standards, Little League International regulations, or other governing authority.

Poles greater than 15 feet vertical dimension from finished grade require a Special Use Permit.

Related Standards: Track/Warning Track Surfacing, Field Diagram | Baseball, Field Diagram | Softball, Signs, Fence | Chain Link.

Materials and Finish

Poles shall be 3½ inches minimum to 6 inches maximum outside diameter, galvanized steel pipe with powder coat finish. Color shall be yellow, PMS 113 or similar. Open Mesh shall be 1.5 inches by 1.5 inches.

Foul Pole height shall be determined by ball field needs. Standard height is 15 feet from adjacent finish grade.

Wing panels shall be 18 inch horizontal width and 15 feet vertical height. Panels shall be 11 gauge expanded and flattened ¾ inch steel fabric.

Features

Pole heights can be 12 feet, 15 feet, 30 feet and 40 feet from adjacent grade with changes to pole diameter and wing panels dimensions.

Installation

Install separate posts in-ground when existing fence posts cannot be used.

Pole shall be aligned with foul line and in line with outfield fence.

Pole foundation shall be designed to accommodate IBC Wind loading requirements.

Foul Pole footer to be sleeved for removal. Top of pole foundation shall be flush to adjacent grade. Top of footing shall be sloped to shed water.

Life Cycle Expectations

A 10 year minimum warranty is required.

Foul Poles are anticipated to require replacement after 30 years of normal and ordinary use.



Foul pole located external to outfield fence

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FUTSAL GOAL

02

Purpose

Futsal Goals shall be provided for youth sports on a hard court surface.

General Information

Futsal Goals shall comply with National Collegiate Athletic Association standards, Alexandria Soccer Association, or other governing authority.

Related Standards: Court Diagram | Futsal

Materials and Finish

Goals shall be reinforced, unitized or welded for stability.

Nets shall be high tenacity polypropylene with a 120mm mesh and a 4mm solid braid, knotless rope.

Goal frame shall be constructed from 3 inch aluminum tubing with smooth welds, joints and corners.

Goal dimensions for 7v7 shall be 6.5 feet in height and 12 feet in length. Goal dimensions for 9v9 games shall be 7 feet in height and 18.5 feet in width.

Nets shall be white in color.

Frames shall be powder coated white in color.

Installation

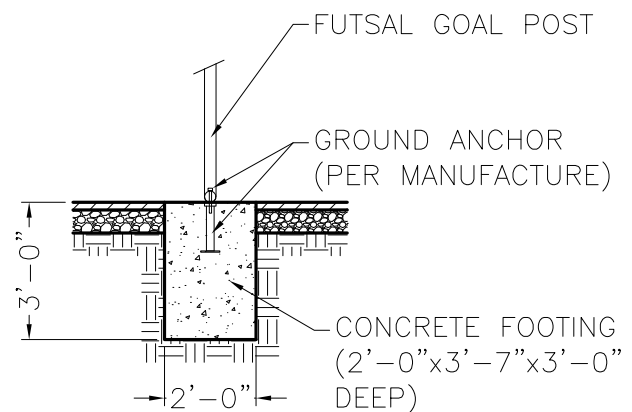
Ground anchor shall be installed in ground prior to surface installation and court lining.

Top of post foundation shall be flush with bottom of final surface. Concrete ground anchor footers shall be 2 feet by 3 feet 7 inches and 3 feet vertical depth minimum.

Life Cycle Expectations

A 1 year minimum warranty is required.

Goals are anticipated to require replacement after 8 years of normal and ordinary use.



SECTION

Footing Diagram



Futsal goal

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FIELD HOCKEY GOAL

02

Purpose

Field hockey goals shall be provided for a variety of age groups including youth and adult.

General Information

Goal construction shall comply with the National Federation of State High Schools, National Collegiate Athletic Association regulations, or other governing authority.

Goals shall be removable, stored on-site and secured in a protected area.

Related Standards: Synthetic Turf | Sports Field, Field Diagram | Field Hockey.

Materials and Finish

Goals shall be reinforced, unitized or welded for stability.

Integral nets shall be weather resistant, heavy duty nylon cord or webbing.

Goal crossbars and uprights shall be constructed from heavy wall aluminum tubing with smooth welds, joints and corners. Tubing shall be 2 inches by 2 inches by .090" thickness minimum. Backstays and stabilizing bars shall be galvanized steel and 1 $\frac{3}{8}$ inch minimum outside diameter.

Goal dimensions shall be 7 feet vertical height by 12 feet horizontal width by 4 feet deep.

Open tube bottoms shall not be permitted.

Frames shall be powder coated white in color.

Nets and bottom boards shall be black in color.

Features

Goals shall be portable with wheel transport systems.

Installation

Goals shall be installed with tie down stakes for natural turf fields.

Goals on synthetic infill turf systems shall be weighted with an anchoring system that does not puncture the turf surface.

Life Cycle Expectations

A 1 year minimum warranty is required.

Goals are anticipated to require replacement after 8 years of normal and ordinary use.



Field hockey goal

Image Footnotes

(1) <https://www.sportsfield.com/products/goals/field-hockey-goals#galleryf001d81608-2>

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LACROSSE GOAL

02

Purpose

Lacrosse goals shall be provided for a variety of age groups including youth and adult.

General Information

Goal construction shall comply with the National Federation of State High Schools, National Collegiate Athletic Association, or other governing authority.

Goals shall be removable, stored on-site and secured in a protected area.

Related Standards: Synthetic Turf | Sports Field, Field Diagram | Lacrosse Girls, Field Diagram | Lacrosse Boys.

Materials and Finish

Goals shall be one piece, reinforced, unitized or welded for stability.

Nets shall be 4mm, weather resistant, heavy duty nylon cord or webbing.

Goal frame shall be constructed from Schedule 40 steel tubing with smooth welds, joints and corners. Frames shall be 1.9 inches outside diameter with .145 inch thick steel minimum. Goal dimensions shall be 6 feet vertical height by 6 feet horizontal width by 7 feet deep.

Back base bars shall be constructed from 4 inch wide, $\frac{3}{8}$ inch thick flat steel bar with lacing bar.

Open tube bottoms shall not be permitted.

Nets shall be white in color.

Frames shall be powder coated orange in color.

Installation

Goals shall be installed with tie down stakes for natural turf fields.

Goals on synthetic infill turf systems shall be weighted with an anchoring system that does not puncture the turf surface.

Life Cycle Expectations

A 1 year minimum warranty is required.

Goals are anticipated to require replacement after 8 years of normal and ordinary use.



Lacrosse goal

Image Footnotes

(1) <https://www.sportsfield.com/products/goals/lacrosse-goals#galleryeb2b63c2dc-5>

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SOCCER GOAL

02

Purpose

Soccer goals shall be provided for a variety of age groups including youth and adult.

General Information

Goal construction shall comply with the National Federation of State High Schools, National Collegiate Athletic Association regulations, or other governing authority.

Goal dimensions will vary according to play level, and shall comply with the National Federation of State High Schools, National Collegiate Athletic Association regulations, or other governing authority.

Goals shall be removable, stored on-site and secured in a protected area.

Related Standards: Synthetic Turf | Sports Field, Field Diagram | Soccer.

Materials and Finish

Goals shall be one piece, reinforced, unitized or welded for stability.

Nets shall be 5mm, hexagonal or square, weather resistant, heavy duty nylon cord or webbing.

Goals shall be constructed from heavy wall aluminum tubing with smooth welds, joints and corners. Goal frame tubing shall be 4 inch outside diameter and .125 inches aluminum wall thickness minimum.

Open tube bottoms shall not be permitted.

Frames shall be powder coated white in color.

Features

Goals shall be portable with wheel transport systems.

Adult goals shall be 8 feet vertical height and 24 feet wide. Goals shall be 5 feet deep at the top and 10 feet deep at the bottom.

Youth goals shall be 6 feet vertical height and 18 feet wide. Goals shall be 4 feet deep at the top and 6 feet deep at the bottom.

Installation

Goals shall be installed with tie down stakes for natural turf fields or weighted down with sandbags.

Goals on synthetic infill turf systems shall be weighted with an anchoring system such as sandbags or other, that does not puncture the turf surface.

Life Cycle Expectations

A 5 year minimum warranty is required.

Goals are anticipated to require replacement after 8 years of normal and ordinary use.



Soccer goal

Intentionally Blank

TENNIS NET SYSTEMS

02

Purpose

Regulation tennis net systems shall be provided at outdoor tennis facilities.

General Information

Regulation nets shall comply with United States Tennis Association (USTA) standards or other governing authority.

Related Standards: Court Surfacing, Court Diagram | Tennis, Signs.

Materials and Finish

Net posts shall be 8 gauge minimum and 3½ inches minimum diameter aluminum or galvanized steel with green powder coat finish with caps.

Net fabric shall be weather resistant No. 36 nylon. Nets shall have a galvanized top cable with a white headband. Protective net edging shall be provided at bottom and ends.

Center net straps shall be included.



Tennis net system

Features

Net tensioning reel shall be vandal resistant. Reel shall be heavy duty with lubrication impregnated parts and heat pinioned gears. Wheel handle shall be concealed or removable. Net posts shall dutybe sleeved.

Center net anchors shall be provided.

Net posts shall be installed on top of piers as determined by soil conditions.

Installation

Posts shall be installed in ground prior to final surface installation and court lining.

Post layout shall comply with USTA athletic standards.

Top of post foundation shall be flush with bottom of final surface. Concrete net post footers shall be 3' foot diameter and 3 feet vertical depth minimum.

Center net anchors shall be set in 1 foot by 1 foot horizontal dimensions and 1 foot minimum vertical depth concrete footings.

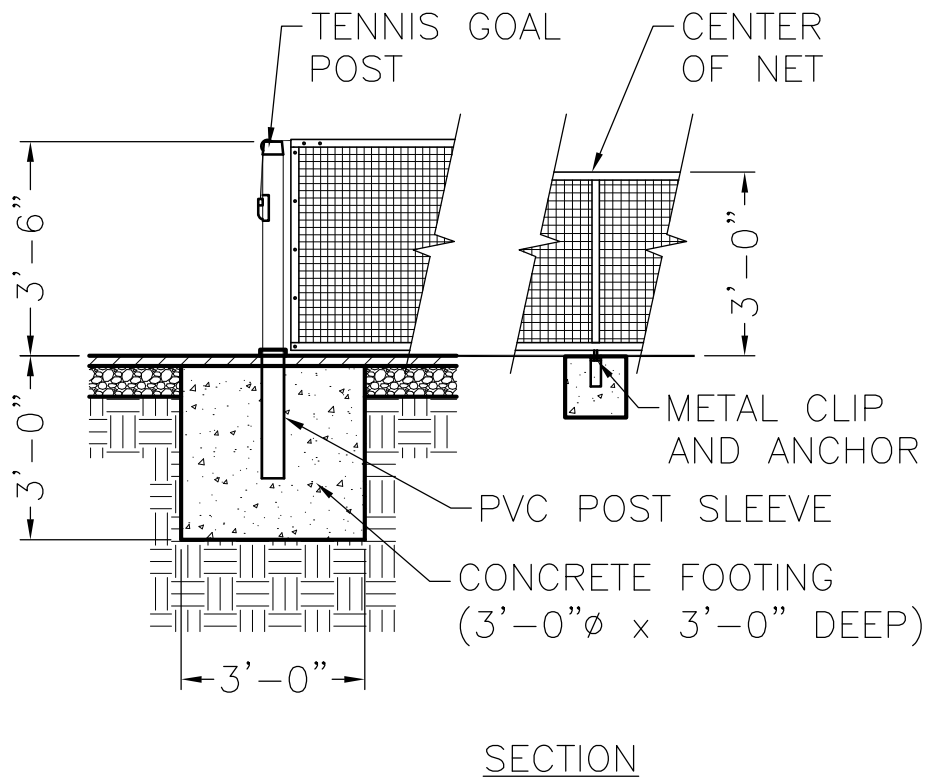
Life Cycle Expectations

A 2 year minimum warranty is required for posts.

Nets are anticipated to require replacement annually with normal and ordinary use.

Posts are anticipated to require replacement after 10 years of normal and ordinary use.

TENNIS NET SYSTEMS



Tennis net end post

Not to scale

VOLLEYBALL NET SYSTEMS

02

Purpose

Volleyball net systems shall be provided at outdoor sand and grass volleyball facilities.

General Information

Net systems shall comply with National Collegiate Athletic Association standards or other governing authority.

Related Standards: Sand Mixes | Volleyball, Court Diagram | Volleyball.

Materials and Finish

Post size shall be $3\frac{1}{2}$ " inches minimum with $\frac{3}{16}$ " wall thickness aluminum with a powder coated black finish.

Netting shall be 4 inch square black mesh No. 24 nylon fabric, with vinyl coated steel top cables. Headband shall be 2 inch white vinyl-coated nylon.

Features

Systems shall have a heavy duty net tensioning reel with removable handle.

Installation

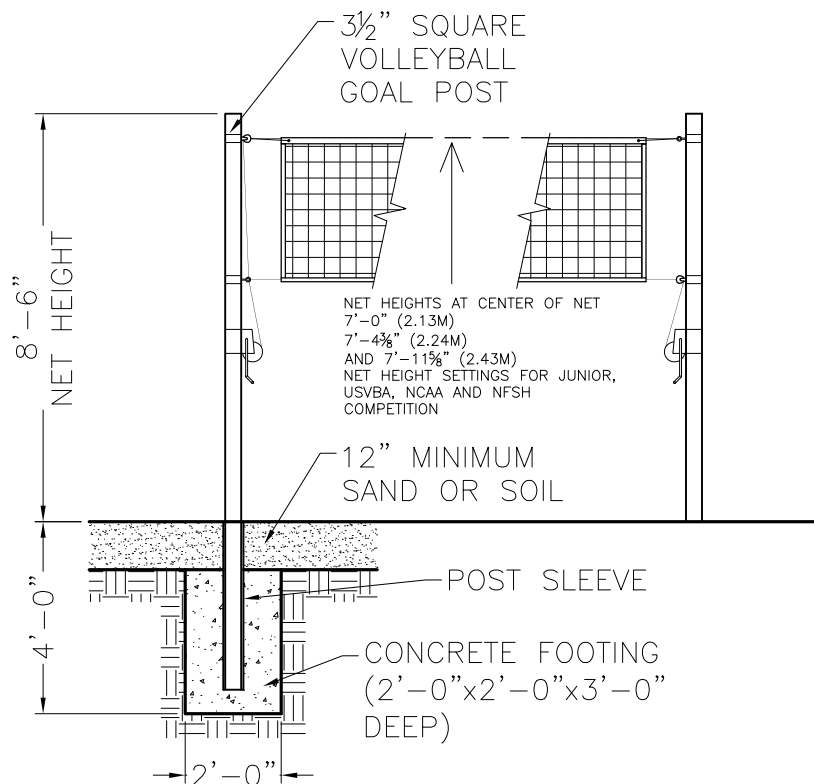
Posts shall be installed in ground with concrete footers. Footers shall be covered with 1 foot minimum vertical depth sand or top soil.

Life Cycle Expectations

A 2 year warranty is required for posts.

Nets are anticipated to require replacement annually with normal and ordinary use.

Posts are anticipated to require replacement after 10 years of normal and ordinary use.



Volleyball net system

Not to scale

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BENCH | NATURAL AREA

Purpose

Natural Area benches shall be located along paths and trails. Natural Area benches shall be located in parks in the Carlyle Coordinated Development District, the Eisenhower East Coordinated Development District and are an option for designated natural areas.

General Information

A standard, free-standing bench shall have back support and two side rails.

The standard bench is the Victor Stanley, Classic Series, model C-96 (6 foot length) in black powder-coated cast iron with kiln-dried 6 inch wide Alaska yellow cedar slats, or City approved equal.

Related Standards: Plaques | Adopt A Bench

Materials and Finish

Benches shall be constructed of a sturdy, durable metal such as galvanized steel, ductile cast iron or other metals designed for commercial exterior use.

Metal finishing shall be of high-quality, permanently affixed powder coating, applied through a heat-finished process.

Metal elements of benches shall be black.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Wood slat seating shall be kiln-dried, natural finished yellow cedar or composite.

Features

Benches may include a center rail.

Installation

Benches shall be permanently affixed to a hardscape surface (concrete, pavers, etc.). Surfacing shall be ADA slope requirements.

Provide 3 feet- 4 inches minimum hardscape clearance on the front side of bench.

Provide a solid surface of 3 feet- 4 inches by 3 feet- 4 inches minimum accessible area directly adjacent to bench.

One out of every five benches per park is required to have the minimum accessible area. One bench with accessible area minimum per park.

Trash or recycling cans shall be placed 5 feet minimum from a bench.

Benches shall be located in seasonally shaded areas when possible.

Life Cycle Expectations

A 10 year warranty is required.

Bench slats are anticipated to require replacement after 10 years of normal and ordinary use.

Bench frames are anticipated to require replacement after 20 years of normal and ordinary use.

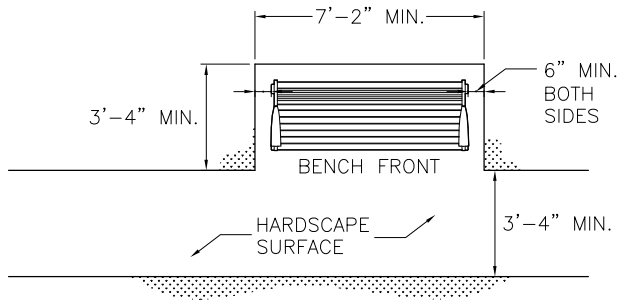


Natural area bench

Image Footnotes

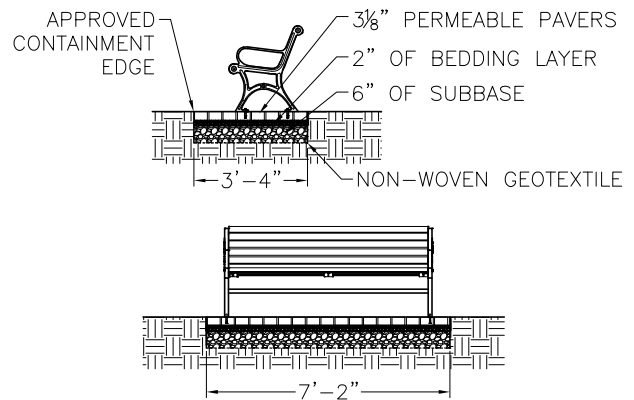
(1) <https://www.victorstanley.com>

BENCH | NATURAL AREA



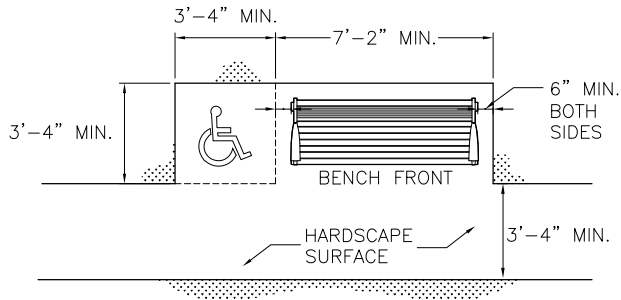
Bench plan view

Not to scale



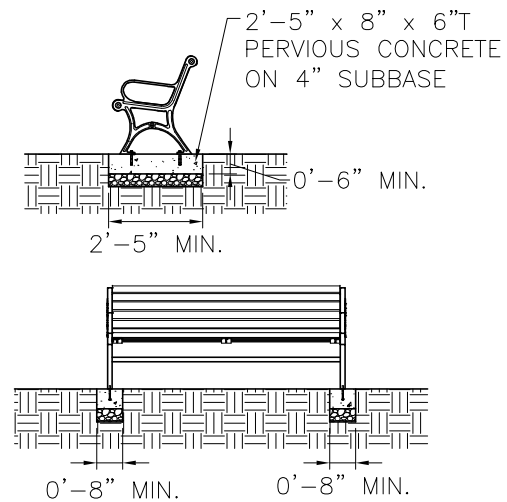
Bench Foundation, Permeable Pavers

Not to scale



Bench with ADA space, plan view

Not to scale



Bench Foundation, Permeable Concrete

Not to scale

BENCH | PARK

Purpose

Park benches shall be located along paths and trails adjacent to activity areas.

General Information

A standard, free-standing bench shall have back support and two side rails.

The standard model is the Victor Stanley, Classic Series, model CR-96 (6 foot length), with vertical slats, backrest and two side handrails in black, or City approved equal.

The backless companion model is the Victor Stanley, Classic Series model CR-298.

Benches shall comply with City of Alexandria Small Area Plan Requirements.

Related Standards: Plaques | Adopt A Bench

Materials and Finish

Benches shall be constructed of a sturdy, durable metal such as galvanized steel, ductile cast iron or other metals designed for commercial and exterior use.

Metal finishing shall be of high-quality, permanently affixed powder coating, applied through a heat-finished process.

Metal elements of benches shall be black in color, semi-gloss finish.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Benches shall contain a minimum of 70% post-consumer steel.

Features

Benches may include a center rail.

Installation

Benches shall be permanently affixed to a hardscape surface (concrete, pavers, etc.). Surfacing shall be ADA slope requirements.

Provide 3 feet- 4 inches minimum hardscape clearance on the front side of bench.

Provide a solid surface of 3 feet- 4 inches by 3 feet- 4 inches minimum accessible area directly adjacent to bench.

One out of every five benches per park is required to have the minimum accessible area. One bench with accessible area minimum per park.

Trash or recycling cans shall be placed 5 feet minimum from a bench.

Benches shall be located in seasonally shaded areas when possible.

Life Cycle Expectations

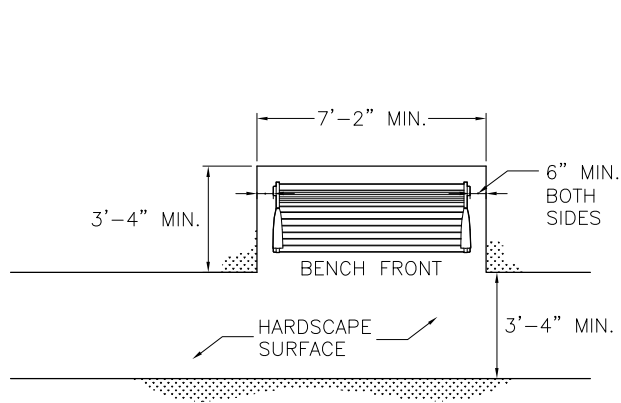
A 10 year warranty is required.

Benches are anticipated to require replacement after 20 years of normal and ordinary use.



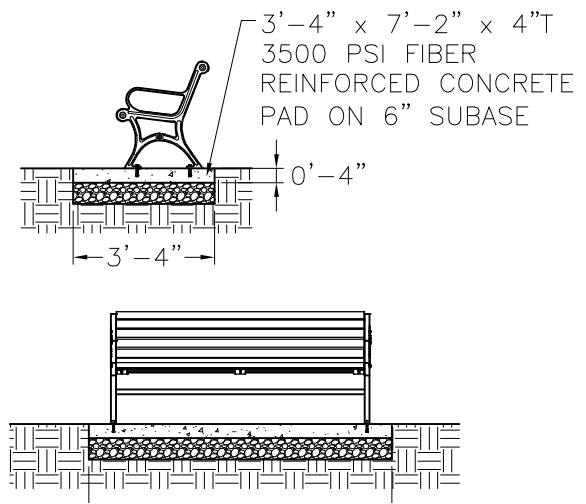
Park bench

BENCH | PARK



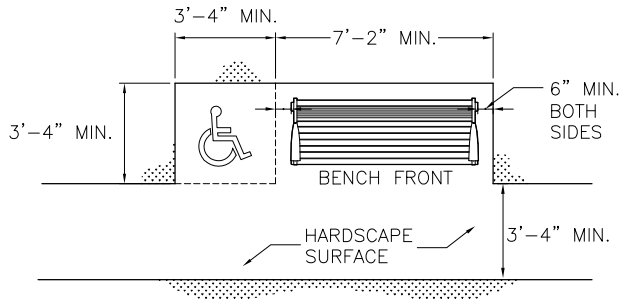
Bench plan view

Not to scale



Bench Foundation

Not to scale



Bench with ADA space, plan view

Not to scale

BENCH | PLAYERS

02

Purpose

Player benches shall be located adjacent to athletic facilities and tennis courts in designated player areas.

General Information

Bench shall be free-standing or permanently installed with a back support.

The standard bench model is Alumagoal, 15 foot length players bench, or City approved equal.

Materials and Finish

Benches shall be constructed of durable metal such as anodized aluminum for commercial and exterior use.

Metal finishing shall be PVC coated or brushed aluminum. Metal surface shall be ribbed/non-slip.

Metal elements of benches shall be black, dark green or grey in color.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Materials and parts shall contain recycled materials.

Bench supports shall be surface mounted in concrete where possible.

Features

Surface mounted and in-ground support posts are available. Support posts shall be $\frac{3}{8}$ inch outside diameter galvanized steel.

Benches are available in the following lengths: 8 feet, 10 feet, 15 feet and 21 feet.

Benches longer than 10 feet shall include bracing and supports to provide long term stability.

Portable benches are available for use on synthetic infill turf fields.

Installation

Benches shall be permanently affixed to a hardscape surface except on synthetic turf fields or temporary installations where a portable version shall be used.

Provide a 3 feet minimum horizontal hardscape clearance on accessible perimeters of benches where mounted on hardscape.

Permanent and portable benches shall include safety end caps on supports.

Life Cycle Expectations

A 10 year minimum warranty is required.

Benches are anticipated to require replacement after 15 years of normal and ordinary use.



Portable bench



Aluminum bench, permanent installation

Intentionally Blank

BICYCLE RACK

Purpose

Bike racks shall be provided at parks and recreation facilities consistent with the "Alexandria Bicycle Transportation and Multi-use Trail Master Plan."

See Department of Transportation and Environmental Services "Bicycle Parking Rack Placement" for additional information.

General Information

Bike racks shall be the "Inverted U" type bicycle rack, approximately 3 feet tall and 18 inches wide after installation.

Commercially produced bike racks meeting the standards identified in the "Bicycle Transportation and Multi-use Trail Master Plan" and this document shall be acceptable alternatives.

The standard bike rack is the Inverted U rack, Victor Stanley, Cycle Sentry Series, model BRWS-101, or City approved equal.

Standard capacity for Inverted U bike rack is 2 bikes.

Related Standards: Surfacing Section.

Materials and Finish

Inverted U bicycle racks shall be fabricated from 2½ inch outside diameter Schedule 40 steel pipe. The bicycle racks shall not be welded in sections.

Racks shall be hot dipped galvanized steel and powder-coated.

Racks shall be black in color.

Metal products shall have smooth welds, joints and corners.

Bike rack construction, including baseplates if necessary, shall be theft and vandal proof.

Features

Alternative racks shall be subject to approval by the Director of Transportation and Environmental Services and the Director of Recreation, Parks and Cultural Activities.

Polished stainless-steel components are an available option on certain sites subject to approval by the Director of Recreation, Parks and Cultural Activities.

Installation

Racks shall be flange mounted on concrete, or imbedded consistent with the "Alexandria Bicycle Transportation and Multi-use Trail Master Plan". Concrete pad shall be sloped to drained.

Where flange mounted on concrete, a 5 inch diameter minimum steel base plate, ¾ inch thick, shall be used, with a minimum of 3 mounting anchor holes in each base plate. Anchor bolts per manufacture's specifications. Anchors shall be theft-proof.

Bike racks shall be set firm and plumb.

Where required, steel shims shall be installed prior to anchoring in place. Baseplates more than ¾ inch from grade shall require high-strength epoxy non-shrink grout.

Bike racks shall be installed consistent with the manufacturer's recommendations.

Multiple racks shall be installed parallel with adjacent units, 3 feet-0 inches apart.

Racks shall be located so that parked bikes do not impede pedestrians.

Racks shall be located 3 feet minimum from parallel or perpendicular walls.

Life Cycle Expectations

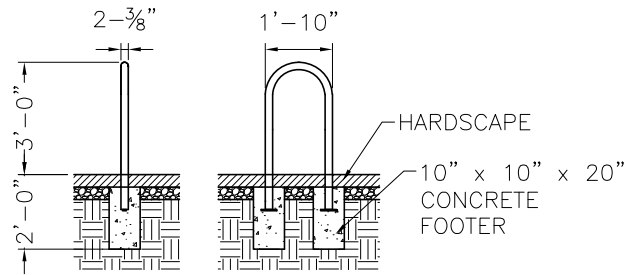
A 10 year minimum warranty is required.

Bike racks are anticipated to require replacement after 20 years of normal and ordinary use.

BICYCLE RACK

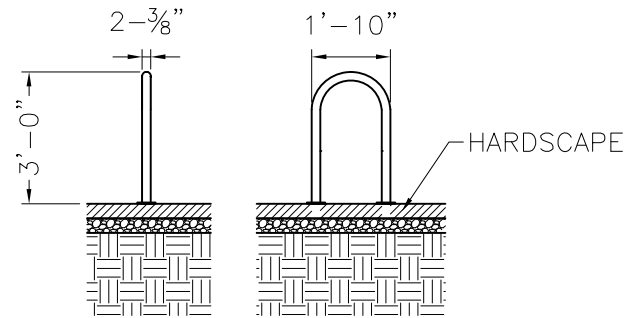


Inverted U bicycle rack



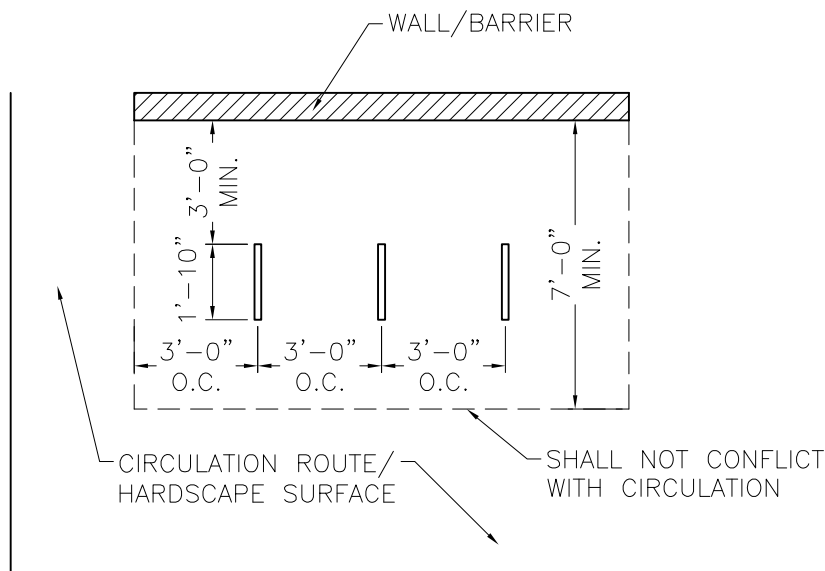
In ground mount

Not to scale



Surface mount

Not to scale



Bike rack, plan view

Not to scale

BLEACHERS

Purpose

Structural bleacher assemblies for small to medium spectator seating shall be installed to provide spectator seating at outdoor athletic facilities. Large spectator seating is not covered in this standard.

General Information

Bleachers shall comply with the most current building codes and ADA standards including requirements for guardrails and barriers, handrails, non-skid surfaces and easily accessible isles.

Related Standards: Surfacing Section.

Materials and Finish

Bleacher seats shall be constructed of anodized aluminum.

Bleachers with more than 5 rows of seats or seats more than 2 feet-6 inches above adjacent grade shall include a chain link guard rail.

Bleacher treads and seats shall be a slip resistant ribbed surface.

Furnished assembly shall be free from sharp edges, pinch points, corners or protrusions.

Seats shall be continuous bench style.

Installation

Comply with manufacturer's recommendations for assembly.

Bleachers shall be installed on a hardscape surface with 4 feet minimum clear horizontal distance from the edge of structure on accessible perimeter.

Where possible, bleachers shall be accessible by hardscape surface pathways.

Bleachers shall be stabilized with wedge anchors.

Bleachers shall be anchored to concrete as required by USBC.

Life Cycle Expectations

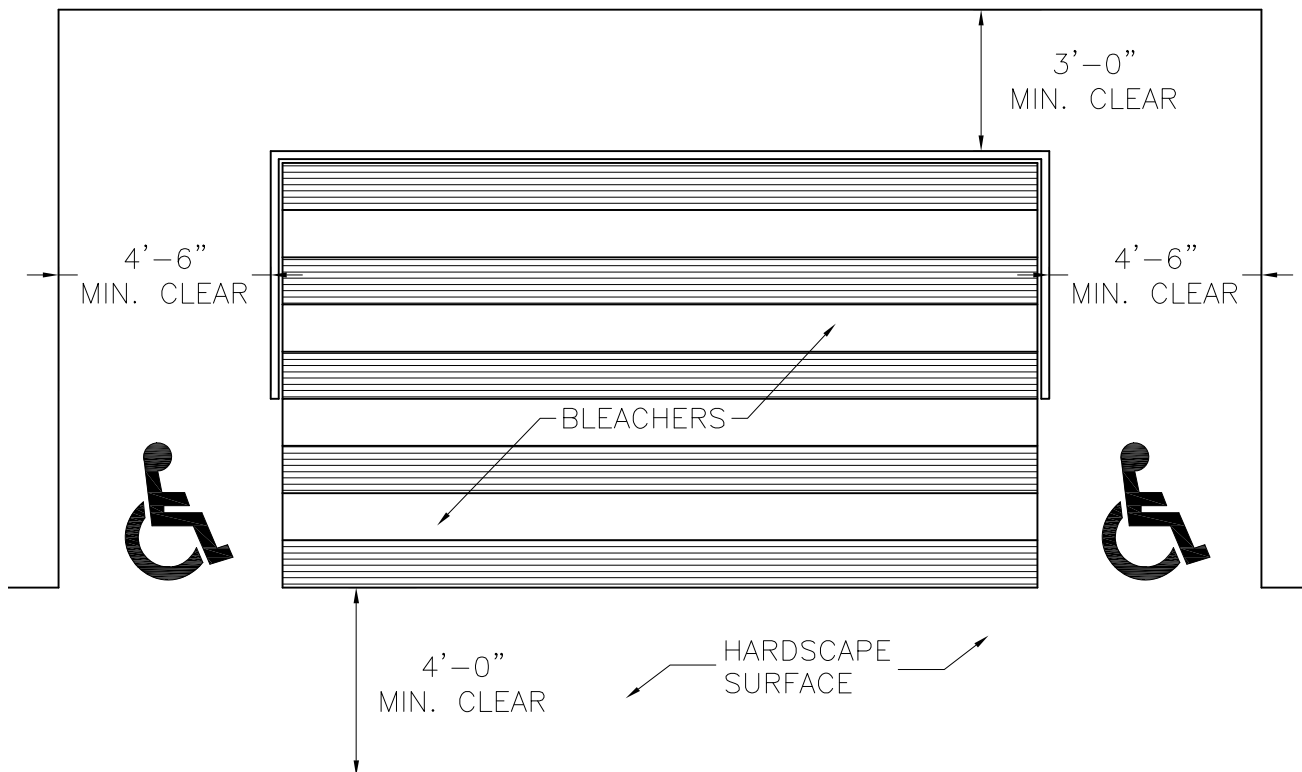
A 5 year minimum warranty is required.

Bleachers are anticipated to require replacement after 10 years of normal and ordinary use.



Typical bleachers

BLEACHERS



Typical bleachers, plan view

Not to scale

BOLLARD | DOG EXERCISE AREA

02

Purpose

Composite bollards shall identify boundaries in official unfenced City Dog Exercise Areas as designated in the Dog Park Master Plan.

General Information

Composite bollards shall be 4 inches by 4 inches square (nominal dimensions).

Materials and Finish

Composite resin shall be structural grade composed of 50% wood fiber and 50% polyethylene or fiberglass.

Bollard color shall be an earth tone or brown color.

Bollards shall be 3 feet in vertical height measured from finished grade after installation.

Features

A 3 inch by 3 inch reflective aluminum sign with "Paw Print" graphic shall be displayed on two sides of each bollard.

A 2 inch wide continuous band of white or yellow reflective material shall be located at the top of each bollard.

Installation

Each bollard shall be permanently installed using a 1 foot-6 inches diameter by 2 feet-6 inches vertical depth concrete footing.

Bollards shall not prevent emergency or maintenance access to fields and parks.

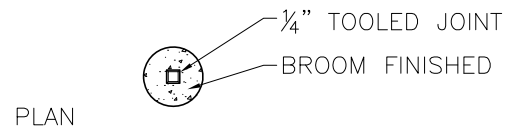
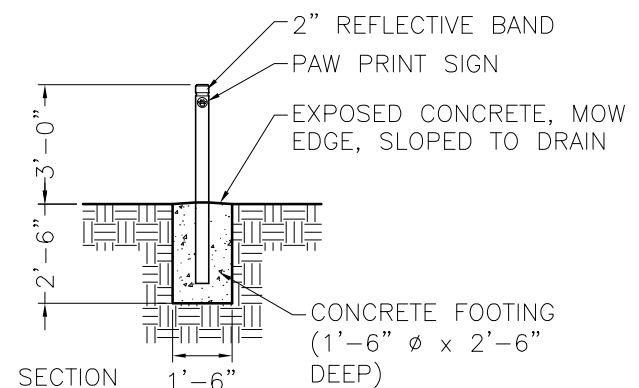
Footings shall be flush to adjacent grade. Top of footing shall be sloped to shed water.

Life Cycle Expectations

Bollards are anticipated to require replacement after 20 years of normal and ordinary use.



Typical bollard



Intentionally Blank

BOLLARD | METAL

02

Purpose

Bollards shall be used to limit unauthorized vehicular traffic without restricting the movement of pedestrians and cyclists in historic areas.

General Information

The standard bollard is the Fair Weather, B-1 Series 6 inch (5.56 inch diameter) bollard with two, 2 inch width collars in black powder-coated, Schedule 10 steel, or City approved equal. Collar relief from the surface of the bollard shall be ¼ inches.

Materials and Finish

Bollards shall be a durable, corrosion resistant metal such as galvanized steel, designed for commercial exterior use.

Metal finishing shall be a high-quality, permanently affixed powder coating.

Bollard color shall be black.

Finished assembly shall have smooth welds, joints and corners.

Hinges, latches and moving parts shall be weather resistant and lubricated at time of installation.

Features

Eyebolts shall be provided in instances where chain will provide an additional barrier between bollards.

Metal bollards are available in heights of 2 feet-6 inches, 3 feet, 3 feet-6 inches, or 4 feet, and 4 inch and 8 inch diameter.

Mounting styles are permanent embedded, surface bolted and sleeved/removable.

Installation

Bollards shall be spaced 3 feet-4 inches clear minimum horizontal distance.

Removable installation shall be used where authorized and emergency access is needed.

Removable mounting requires a sleeve/casing installed 2 vertical feet into the ground. Removable bollards shall be secured with lock and key.

Bollards shall be marked with reflective tape between the decorative collars.

Life Cycle Expectations

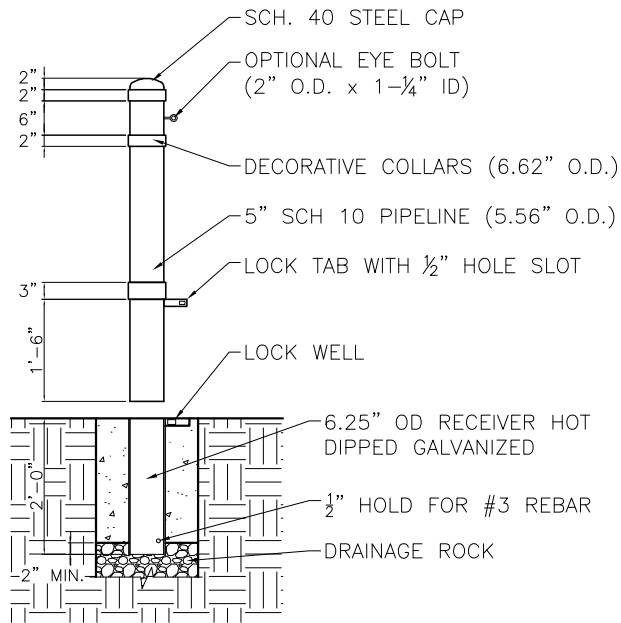
A 10 year minimum warranty is required.

Bollards are anticipated to require replacement after 20 years of normal and ordinary use.



Metal bollard

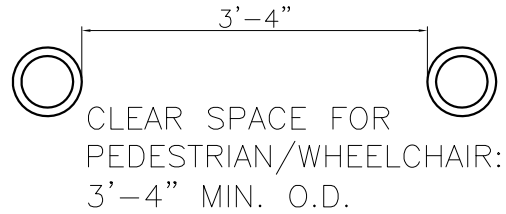
BOLLARD | METAL



SECTION

Bollard section

Not to scale



Bollard spacing

Not to scale

BOLLARD | WOOD

02

Purpose

Wood bollards shall limit vehicular traffic without restricting the movement of pedestrians and cyclists in natural resource parks.

General Information

Wood bollards shall be constructed of 4 inch by 4 inch pressure treated lumber embedded into 1 foot-6 inches minimum solid subgrade material (nominal dimensions).

Vertical height shall be 2 feet-6 inches minimum and 4 feet maximum measured from finish grade.

Klin dried to less than 15%.

Materials and Finish

Wood bollards shall be constructed of pressure treated lumber. Pressure treated lumber shall be Alkaline Copper Quaternary (ACQ) or Copper Borate Azole (CA) type.

Bollard tops shall include a metal post cap with a 45 degree chamfer continuous at top.

A 2 inch wide continuous band of white or yellow reflective material shall be located at the top of each bollard.

Installation

Bollards shall be spaced 3 feet-4 inches minimum horizontal distance bollard face to bollard face.

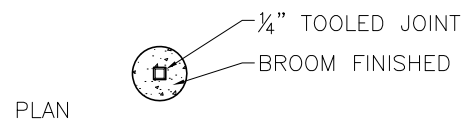
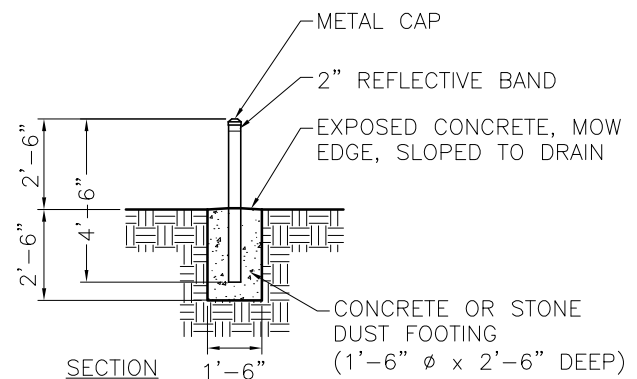
Bollards shall not prevent emergency or maintenance access to fields and parks.

Wood bollards shall be mounted in concrete footing with 1 foot-6 inches minimum diameter and 2 feet-6 inches minimum vertical depth. Footing shall be flush to adjacent grade. Top of footing shall be sloped to shed water.

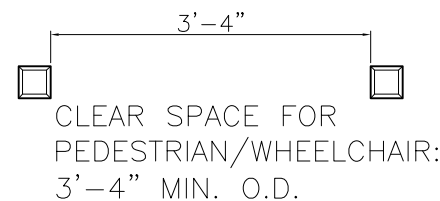
Removable installation shall be used where authorized and emergency access is needed.

Life Cycle Expectations

Bollards are anticipated to require replacement after 15 years of normal and ordinary use.



Bollard section Not to scale



Bollard spacing Not to scale

Intentionally Blank

DRINKING FOUNTAIN

02

Purpose

Water fountains shall be provided in parks where water supply is desirable and potable, particularly near active park sites and playgrounds. Fountains with a ground level dog fountain shall be installed in parks dedicated pet areas and other areas receiving large amounts of pedestrian traffic.

General Information

Fountains shall be accessible for wheelchair and mobility devices at standard height.

Fountains shall provide 2 feet-3 inches minimum vertical clearance and 2 feet-10 inches maximum vertical clearance from adjacent finished grade.

The drinking bubbler height shall be 3 feet-2 inches maximum vertical distance from adjacent grade.

Fountains shall be activated by a low-weight, 5lbs or less, push-button operation mechanism located below the bowl.

Bubblers shall have a welded protector shield.

Fountains shall include a vandal proof panel for access to interior systems and filters.

The standard park drinking fountain is the Most Dependable Fountain Inc., Model 440SM drinking fountain or City approved equal. Fountains that require a bottle filler option, model 10145SM shall be used.

Materials and Finish

Fountains shall be constructed of standard steel or stainless steel, for commercial and exterior use.

Green or Black powder coated shall be the finish options for fountains. The bubbler, bowl and buttons shall be satin finish stainless steel.

Metal products shall have smooth welds, joints and corners.

Hinges, latches and mechanical parts shall be weather and rust resistant.

Features

Pet fountains, jug fillers, and interior hose bib with lockable cover shall be available options from fountain manufacture.

Installation

Fountains shall be mounted permanently to hardscape surfaces or in-ground mount per manufacturer's recommendations.

Provide a 3 feet-4 inch minimum horizontal dimension of hardscape surface at the accessible perimeter of each fountain.

Fountains shall be installed by a licensed plumber consistent with applicable City and State Codes.

Top of slab shall be sloped to shed water.

Fountains with jug fillers shall have adequate drainage.

Life Cycle Expectations

A 1 year minimum warranty is required.

Fountains are anticipated to require replacement after 5 years of normal and ordinary use.



Drinking fountain

Intentionally Blank

FITNESS EQUIPMENT

Purpose

Fitness equipment shall maximize exercise and safety, while minimizing long-term maintenance.

General Information

Equipment shall be designed and manufactured to comply with the most current CPSC and ASTM safety standards and guidelines.

Equipment shall be reviewed and approved by the Director of Recreation, Parks and Cultural Activities.

Equipment shall have an approved safety surface.

Related Standards: Engineered Wood Fiber, Safety Surfacing.

Materials and Finish

Equipment shall be constructed of durable materials designed for frequent exterior use and high resistance to varied seasons and vandalism.

Products containing recycled materials shall be used.

Equipment surfaces shall be slip resistant and drain efficiently.

Main structural components shall be one-piece construction, with a minimum of bolts and fasteners. Structures with excessive joints, rough welded corners, pinch points, or other sharp edges or points shall not be used.

Use of light or bright colors shall be minimized on components subject to frequent wear or contact.

Hardware and fasteners shall be stainless steel or treated with a rust proof finish.

Maintenance kits shall be provided for each fitness apparatus.

Manufacturer and/or identification number shall be clearly displayed on each apparatus. Labels indicating the intended user age group shall be displayed on each play apparatus. Labels shall be located at transfer stations or other well visible areas.

Features

Equipment that has been recalled or not recommended by the Consumer Product Safety Commission shall not be used.

The use of the following items shall be minimized: ropes and PVC coated components.

PVC or other plastic coatings shall not be used on flexible components such as chains and cables.

Installation

Install equipment consistent with manufacturer recommendations and industry safety specifications.

Equipment shall be permanently ground anchored, or surface mounted to an approved surface.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not be exposed above the approved safety surfacing.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the equipment.

A warranty of 10 years minimum is required.

Fitness Equipment is anticipated to require replacement after 15-20 years based on normal and ordinary use.



Fitness Equipment

Intentionally Blank

FLAGPOLE

Purpose

Flagpoles shall be installed to display local, state and federal flags in parks where the national anthem is played and where memorial or military services are held.

General Information

Flags and flagpoles shall be consistent with the United States Flag Code.

Flagpoles shall be 30 feet maximum vertical height without an approved Special Use Permit per City code Section 9-201(A)(1)(b).

The halyard and pulley system shall be interior and accessed by a locked panel at the base of the pole.

Related standard: Lighting | Flagpole, Lighting | Ground Recessed.

Materials and Finish

Flagpoles shall be constructed of seamless extruded aluminum alloy tubing, with a minimum wall thickness of $\frac{5}{32}$ inch, and a brushed satin finish.

Flagpoles and flashing collar shall have a directional, medium satin polish and be sealed with a clear, hard-coat wax.

Flagpoles shall be designed to fly a 6 feet by 10 feet American flag, a 5 feet by 8 feet Virginia State flag and a 4 feet by 6 feet City of Alexandria flag in combination.

Installation

Flagpoles shall not be located in conflict with active uses or vegetation.

Flagpoles shall be installed in locations that do not disrupt pedestrian traffic. Provide a 3 feet-4 inch minimum horizontal width hardscape surface adjacent to accessible pathway.

Flagpoles shall be located adjacent to accessible hardscape surfaces.

Concrete footings shall be consistent with manufacturer's recommendations and designed by a professional engineer. Top of footing shall be sloped to shed water.

Flagpole footings shall be designed for wind loading consistent with City of Alexandria Code.

Where multiple flagpoles are desired, space flagpoles using the largest flag to be flown on the pole plus four feet.

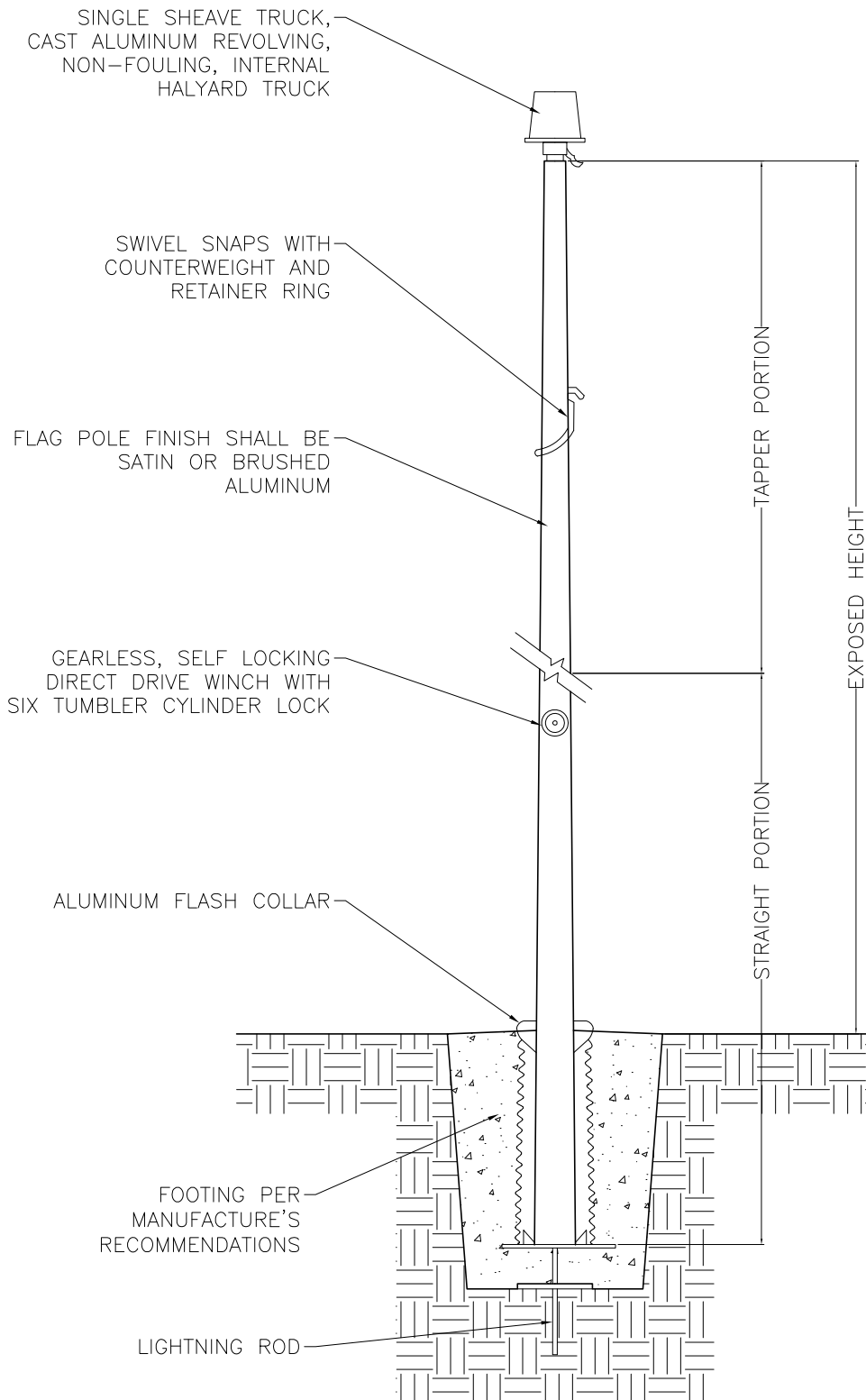
Flag sponsors external to the City shall provide three of each flag type.

Life Cycle Expectations

A 10 year minimum warranty is required.

Flagpoles are anticipated to require replacement after 20 years of normal and ordinary use.

FLAGPOLE



Flagpole

Not to scale

GRILL

02

Purpose

Grills shall be located in areas where food consumption is encouraged.

General Information

Where grills are permitted, at least one grill in each park shall be wheelchair accessible, with a minimum 1 per every 5 installed at each park or 20% minimally of park seating.

The standard grill model is manufactured by Pilot Rock, Model Number N-24-B2, or City approved equal.

Grills shall be located based on prevailing winds, in relationship to pavilions or nearest picnic area. Grills shall be located to minimize impact of odors, noise, and fire in relation to adjacent uses.

Grills shall not be placed in RPAs.

Related Standards: Grill | Receptacle Ash/Coal.

Materials and Finish

Finish shall be black enamel.

Units shall not contain plastic, resin, wood or unfinished metal.

Metal products shall have smooth welds, joints, and rounded corners. Joint fasteners shall be embedded or sealed.

Units shall have a firebox dimension of 18 inches depth by 2 feet wide by 10 inches tall.

Features

Grill cover is optional from manufacture.

A rust resistive metal scoop shall be provided with each grill to dispose of ashes/coals.

Cooking grate shall be anti-theft.

Installation

Pedestal grills shall be permanently mounted on in-ground posts. Adjacent grade shall be covered by a surface layer of compacted stone dust 3 inches vertical depth over filter fabric and extending 3 feet-4 inches in each direction from the base of the pedestal.

ADA grills shall be mounted between 1 foot-7 inches and 2 feet from finished grade to the cooking surface. Standard grills may be mounted up to 4 feet from finished grade to the cooking surface.

Provide a solid surface of 3 feet-4 inches by 3 feet-4 inches minimum on all sides of the grill. Accessible grill units shall have a 5 foot minimum access at the front of the grill facing towards the accessible path.

Grills shall be located a minimum of 16 feet from any tree trunk and 60 feet from any playgrounds and dog areas.

Top of footing shall be sloped to shed water.

Life Cycle Expectations

A minimum warranty of 5 year is required.

Grills are anticipated to require replacement after 8 years of normal and ordinary use.

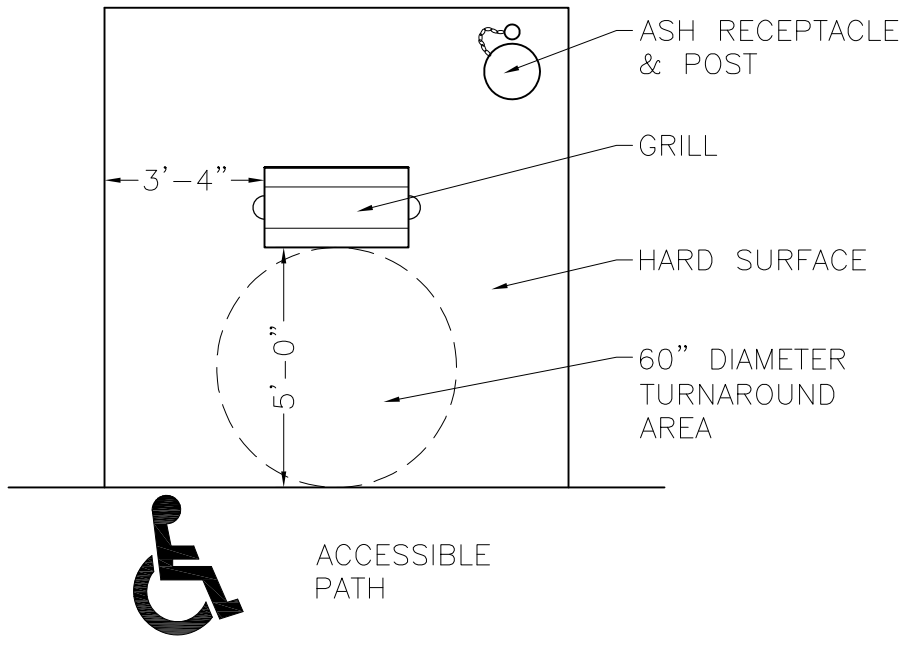


Grill

Image Footnotes

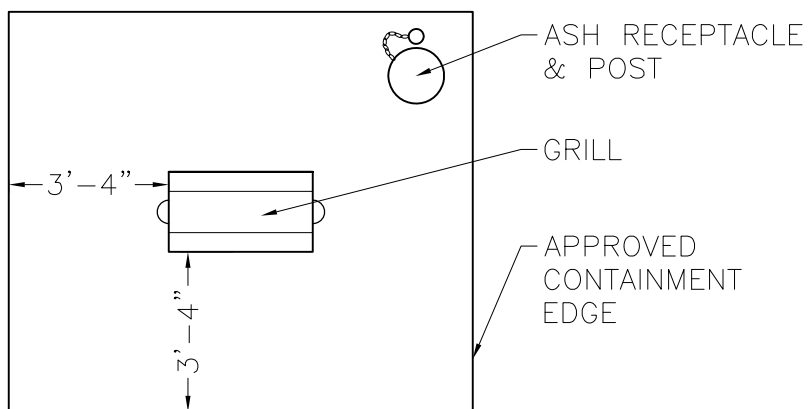
(1) <https://www.pilotrock.com/charcoal-grills/n-24-series-charcoal-grill/#prod-desc>

GRILL



Accessible grill, plan view

Not to scale



Grill station, plan view

Not to scale

GRILL | RECEPTACLE ASH/COAL

Purpose

Ash/coal receptacles shall be provided at each park grill for the safe and accessible disposal of ashes/coins.

General Information

Parks allowing the use of grills shall provide one ash/coal receptacle per grill.

The standard receptacle size is 5 gallon. The top of the receptacle shall be 1 foot-6 inches minimum and 4 feet maximum vertical height.

Each receptacle shall include a lid.

Each lid and can shall be connected by a chain to prevent theft.

Each receptacle shall be clearly marked with red lettering indicating the specific use of the bin.

Related Standards: Grill.

Materials and Finish

The receptacle and lid shall be 25 gauge minimum galvanized steel, or other fire and heat retardant material.

Steel chains shall be $\frac{3}{16}$ inch diameter welded, hot dipped galvanized.

The receptacle, lids and chains shall be factory applied silver/gray in color.

Material shall be of high tensile strength, suitable for heavy public use and exterior exposure.

Place 1"-2" of poured concrete in bottom of receptacle to prevent tipping over.

Features

Heat-resistant metal scoops shall be provided at each receptacle. Scoops shall be commercial grade and include a chain or other method of securing to the receptacle.

Installation

Ash/coal receptacles shall be secured to an in-ground mounted pole or grill post with a secure chain. Poles shall be 2½ inches outside diameter with a galvanized finish. Poles shall be 3 feet-6 inches, and include a cap and welded handle to accommodate locked chains for the receptacle.

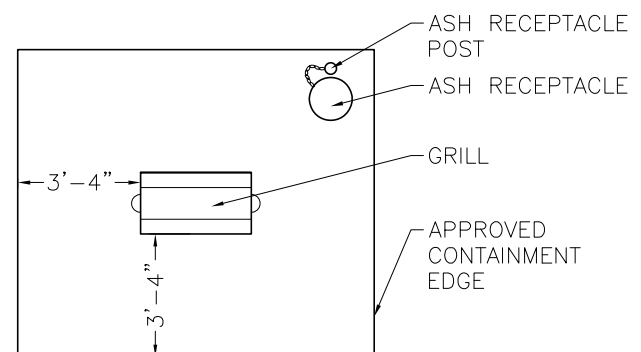
Poles shall be mounted in a 1 foot-6 inches minimum diameter and 2 feet-6 inches minimum vertical depth concrete footer. Top of footing shall be sloped to shed water.

Bins shall be placed on a hardscape pad and accessible by a hard surface path with a 3 feet-4 inches minimum horizontal width on the side adjacent to the solid surface path.

Life Cycle Expectations

A 5 year minimum warranty is required.

Receptacles are anticipated to require replacement after 2 years of normal and ordinary use.



Receptacle location diagram

Not to scale

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HAND RAILS | STAND ALONE

Purpose

Hand rails shall be placed in locations where ramps are required to accommodate 6 inches or more change in grade. Handrails may also be used in conjunction with walls totaling 1 foot-6 inches or more in vertical height.

General Information

Hand rails shall be installed consistent with state and local building code and federal ADA standards.

Guardrails and Handrails shall be continuous.

Materials and Finish

Handrails shall be constructed from rust resistance metals.

Metal finishing shall be of high-quality, permanent, powder coating, 4-6 mil minimum thickness, provided through a heat-finished process or polished surface for stainless steel. In historic districts, color shall be black.

Metal products shall have smooth welds, joints and properly treated corners with no sharp or rough edges. Joint fasteners shall be embedded or sealed.

Features

If site specific requirements cause changes to height, design configuration or finish color in conflict with these guidelines, the proposed design shall be submitted for compliance approval for accessibility by the Department of Recreation, Parks and Cultural Activities.

In heavy use areas, skateboard deterrents may be required, except when ADA compliance is mandated.

Installation

Secure rails through a permanent in-ground or surface method consistent with manufacturer's recommendations.

Provide hand rails on both sides of the path.

Handrails shall be 5 feet minimum horizontal length.

Engineer and anchor hand rails to withstand loads per USBC.

Life Cycle Expectations

A 5 year minimum warranty is required.

Hand rails are anticipated to require replacement after 20 years of normal and ordinary use.

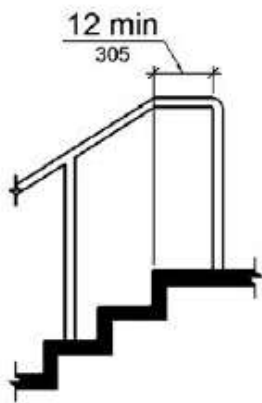
HAND RAILS | STAND ALONE



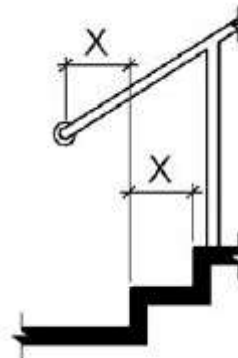
Handrail at stair



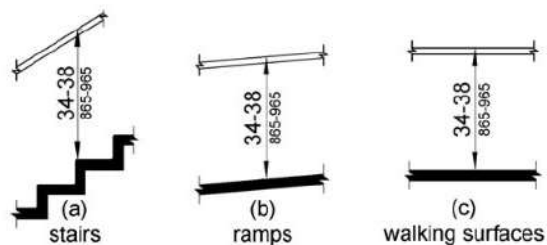
Handrail at stair



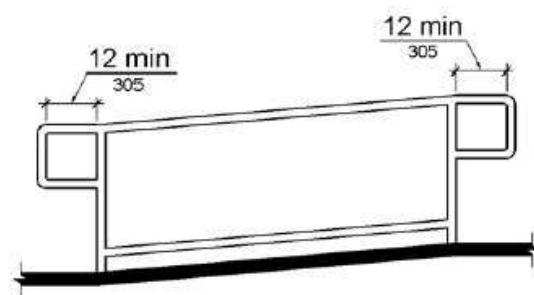
Top Handrail Extension at Stairs



Bottom Handrail Extension at Stairs



Handrail heights (1)



Handrail extension at ramp (1)

Image Footnotes

(1) 2010 ADA Standards for Accessible Design, Department of Justice

HAND SANITIZING STATION

Purpose

Hand Sanitizing Stations shall be available in outdoor areas, playgrounds and in high traffic areas to keep hands clean.

General Information

Stations shall be placed in a visible location.

Stations shall be ADA compliant and bottom of housing shall be no more than 52 inches in vertical height from finished grade.

Stations shall be either wet towel, liquid, or foam type with built in reservoir.

Materials and Finish

Station post shall be constructed of heavy duty steel with powder coated finish.

Housing shall be 14 gauge steel with powder coated finish or Acrylonitrile butadiene styrene with UV inhibitors.

Station Colors shall be black or neutral in color.

Exposed fasteners, jagged edges, or sharp corners shall not be exposed.

Mounting hardware shall be stainless steel or galvanized.

Features

Stations shall have a lockable box.

Dispensing shall be push type or motion activated.

Installation

Stations shall be placed on a vertical surface or single post in ground.

Provide a solid surface of 3 feet- 4 inches by 3 feet- 4 inches minimum accessible area directly in front of station.

Life Cycle Expectations

A 1 year minimum warranty is required.

Dispensers are anticipated to require replacement after 5-10 years of normal and ordinary use.

Intentionally Blank

LIGHTING | AREA

02

Purpose

Lighting shall be used to illuminate portions of the park including parking lots, trails and designated areas.

General Information

Square, down light fixtures shall be installed in park locations subject to historic light guidelines or City of Alexandria small area plan approval may be modified.

Lighting in POS zoned properties requires a Special Use Permit.

Lighting levels to comply with the City of Alexandria lighting standards. Lights shields may be required by the City.

Light poles that exceed more than 15 feet in vertical height shall require approval from the City.

Materials and Finish

The lamp housing shall be die-cast aluminum with a black powder coat finish.

The lens frame shall be die-cast aluminum with a hinge assembly for maintenance. The lens shall be high impact, clear-tempered glass.

The metal pole and fixture shall be finished with a black powder coat finish.

Light fixtures shall be mounted on square aluminum poles with an extended pole mounting arm to offset the fixture.

Light poles shall be 15 feet in height from ground level and installed with an anchor base. The anchor bolts shall be recessed into an anchor base casting. Provide tamper resistant covers.

Foundations shall be designed by a professional engineer licensed in the Commonwealth of Virginia.

Features

Light fixtures that require separate ballast boxes are not permitted.

Lamps may include a wire guard.

Lamps shall be LED. Other lamp options may be installed with the approval of the Director of Recreation, Parks and Cultural Activities, and the Director of Transportation and Environmental Services.

Double fixtures shall be specified with approval from the City.



Square light fixture

LIGHTING | AREA

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of Light pole foundations shall be flush to finished grade and sloped to shed water.

Connections installed beneath paving shall be sleeved with 2 inch diameter minimum PVC pipe.

Installation work shall be performed in conformity with USBC.

Luminaire shall not extend below fixture housing.

Provide grounding per local electrical codes.

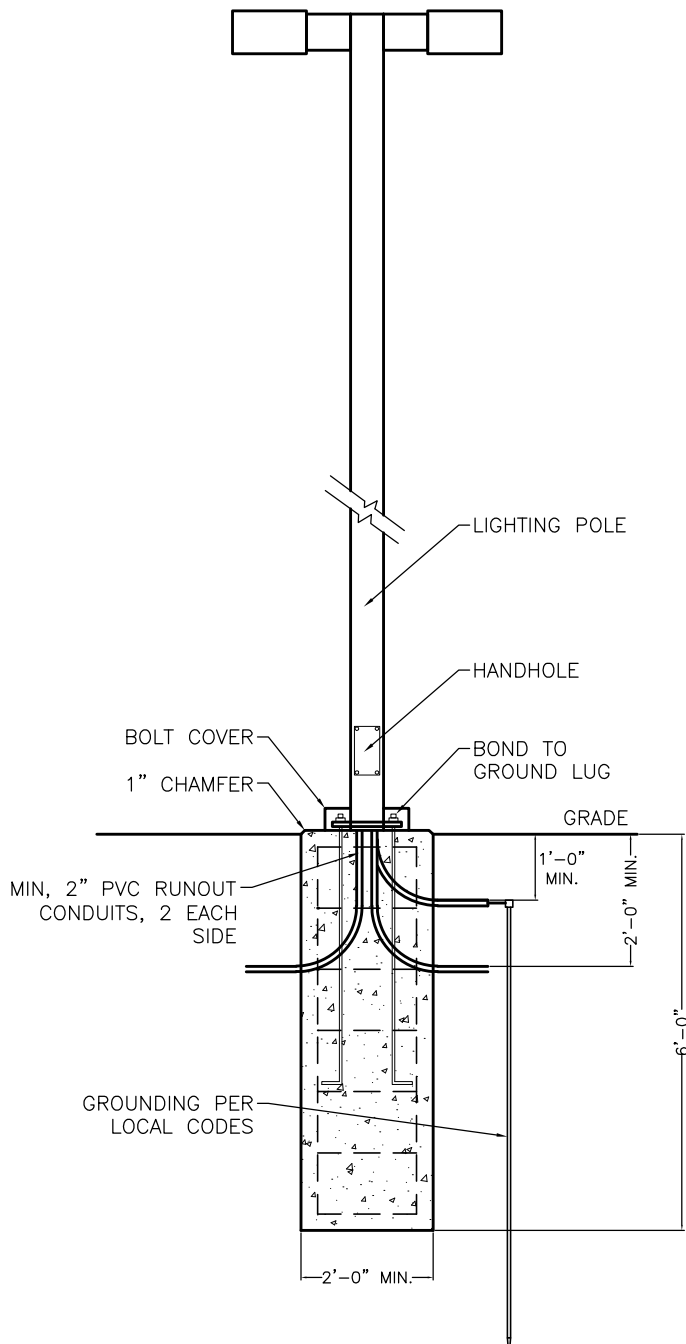
As-built drawings shall be provided to the City following the completion of lighting projects. Drawings shall show field verified offset dimensions, pole locations, and underground electrical components.

Life Cycle Expectations

A 3 year minimum warranty is required on area light fixtures.

A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.



Area light pole assembly

Not to scale

LIGHTING | ATHLETIC FACILITIES

Purpose

Athletic field and court lighting systems shall be provided to ensure safe play environments where athletic field/court use is desired beyond normal daylight hours.

General Information

Athletic field and court lighting shall be provided as a complete sports lighting system.

The standard system is the Musco Light-Structure or City approved equal.

Lighting levels shall provide safe play for the programmed sports. The average foot candle level on a rectangular playing surface shall be 50 fc and the uniformity shall be 2.0:1.0. The average foot candle level on a court playing surface shall be 30 fc and designated uniformity shall be 2.0:1.0.

Lighting in POS zoned properties requires a Special Use Permit.

A photometric analysis shall be required and approved by the Director of Recreation, Parks, and Cultural Activities.

Materials and Finish

Light poles and cross arms shall be galvanized steel, and shall meet wind loading requirements of the IBC Building Code and AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Bases shall be pre-stressed direct burial concrete. Foundations shall be designed by a professional engineer licensed in the Commonwealth of Virginia.

The mounting heights for athletic fields are 60-80 feet above the playing surface. Mounting heights for athletic courts are 20-40 feet above the playing surface.

Wiring shall be contained inside the cross arms and poles.

Light fixtures shall be 1500W or 1000W LED lamps with external visors to minimize light glare and spill.

Features

Light system shall include a remote monitoring system for performance tracking.

Lighting system shall include a remote lighting control system that allows operation via web site, phone, and email. System shall be programmable up to a year in advance and accept a seven day schedule.

Lighting system shall include an accessible on-off selector switch located on one of the poles.

Lighting shall include pegs on poles for maintenance access.

Ballasts shall be located on each individual pole.

System shall have a emergency shut off box.

Installation

Light pole installations require separate permits.

Coordinate player-activated switches and timers to minimize additional infrastructure.

Installation work shall be performed in conformity with USBC.

Poles shall include direct burial concrete bases.

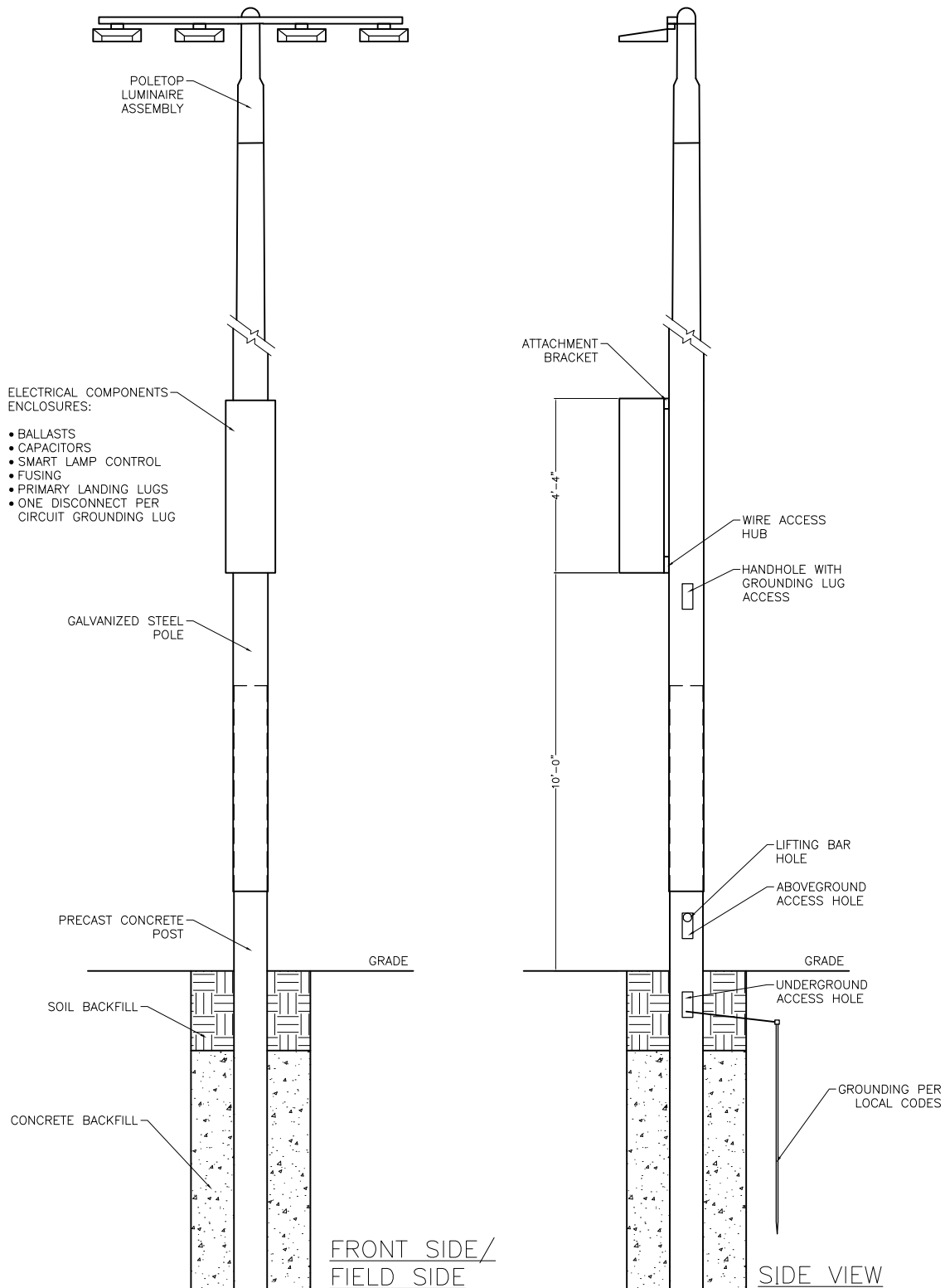
Light pole installations shall require lighting strike grounding protection systems designed by a professional engineer.

Life Cycle Expectations

A 25 year warranty is required on athletic lighting systems.

Lighting systems are anticipated to require replacement after 40 years of normal and ordinary use.

LIGHTING | ATHLETIC FACILITIES



Typical athletic lighting

Not to scale

LIGHTING | FLAGPOLE

02

Purpose

Solar lighting shall be used to illuminate flags and flag poles during evening and park hours. Locations may require all night illumination.

General Information

Commercial grade square or round up light fixtures and solar panels shall be installed on flag poles. Fixtures shall be weather tight, vandal proof and have key access.

Related standard: Flagpole.

Materials and Finish

The lamp housing shall be die-cast aluminum with a black powder coat finish or stainless steel.

Lamps shall be LED.

Features

Fixtures shall have a dusk to dawn sensor with rechargeable battery pack.

Mounting hardware/shall be included.

Installation

Light fixtures shall be clamp mounted on poles with an extended pole mounting arm to offset the fixture from pole.

Light fixtures shall be mounted between 10 feet and 15 feet in height from ground level.

Life Cycle Expectations

A 1 year minimum warranty is required on solar pole light fixtures with a minimum lifespan of 40,000 hours.

Lights are anticipated to require replacement after 10 years of normal and ordinary use.

Intentionally Blank

LIGHTING | GROUND RECESSED

Purpose

Ground recessed lights shall be used to illuminate significant park features or items of special interest such as art, pathways and signs.

General Information

Lighting installations require electrical permits.

Lighting in Public Opened Space zoned properties requires a Special Use Permit.

Materials and Finish

The lamp housing shall be composite material, resistant to ultraviolet degradation and corrosion or rust resistive metal.

Lamp housing and lens shall be weather tight and vapor proof.

The lens shall be ADA compliant, anti-slip material and able to withstand loads up to 200 PSI, with a commercial grade frame.

Lens frame material shall be bronze, aluminum or black finish.

Lamps shall be LED.

Features

Directional shields shall be provided where appropriate.

Installation

Lights shall be installed in locations with positive drainage away from lights.

Flush light fixtures shall be installed in hardscape surfaces.

Connections installed beneath paving shall be sleeved.

Installation work shall be performed consistent with USBC.

Fixture shall be ground faulted protected with city code requirements and applicable NEC requirements.

Install manufacturer's recommended drainage.

Life Cycle Expectations

A 1 year minimum warranty is required on ground recessed light fixtures.

Lamps are anticipated to require replacement after 2 years of normal and ordinary use.

Light fixtures are anticipated to require replacement after 7-10 years of normal and ordinary use.

Intentionally Blank

LIGHTING | HISTORIC POLE

Purpose

The historic pole light shall be used as a street or park road light in the City's Historic Districts to illuminate portions of public land or right-of-way.

General Information

Gadsby light fixtures shall be installed in the Gadsby Light District within the Old and Historic District of Alexandria.

Lighting in Public Open Space zoned properties requires a Special Use Permit.

Materials and Finish

Lights shall be mounted on aluminum poles.

Poles and fixtures shall be finished with a black UV-resistant catalyzed urethane coating.

Light poles/fixtures/luminaires shall be 14 feet total height from finished grade and installed with an anchor base.

The ornamental base cover shall be designed to cover the anchor bolts with one or two pieces, be vandal resistant, and finished to match the post.

The pole top shall meet the requirements of the Department of Transportation and Environmental Services.

Fixture metal finishing shall be a high-quality, permanently affixed powder coating, done through a heat-finished process.

Lamps shall be LED.

Features

Light fixtures that require separate ballast boxes are not permitted.

Globes/post tops shall include full top reflectors.

Color temperature shall be between 3,000K and 4,000K.

Pole can include arms to hold flower baskets or banners as approved by the Director of Recreation, Parks, and Cultural Activities.

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of light pole foundations shall be flush to finished grade. Top of footing shall be sloped to shed water.

Connections installed beneath paving shall be sleeved. Install ground fault protection at each pole.

Installation work shall be performed in conformity with USBC.

Lights shall be installed on a GFCI circuit.

Lights shall have photocell and time clock activation.

Life Cycle Expectations

A 3 year minimum warranty is required on historic light fixtures.

A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

LIGHTING | HISTORIC POLE



Gadsby historic pole light



Historic light fixture

Image Footnotes

(1) <http://www.hadco.com>

LIGHTING | STREET POLE

Purpose

The street pole light shall be used to illuminate portions of the park system, including streets, park roads and trails.

General Information

Light fixtures shall be installed as a street or park road light in areas not guided by historic light fixture requirements or small area plan requirements.

Lighting in Public Open Space zoned properties requires a Special Use Permit.

The standard light fixture is Hadco, Inc., R53, or City approved equal.

Materials and Finish

The globe/post top shall be Type V, clear stabilized acrylic with a Victorian style roof.

The pole and fixture shall be finished with a black UV-resistant catalyzed urethane coating.

Lights shall be mounted on fiberglass, fluted and tapered decorative poles for post top lights.

Light poles/fixtures/luminaires shall be 14 feet total height from finished grade and installed with an anchor base.

The ornamental base cover shall be designed to cover the anchor bolts in one or two pieces, be vandal resistant and finished to match the post.

Lamps shall be LED.

Features

Light fixtures that require separate ballast boxes are not permitted.

Post tops shall include full top reflectors and may include a house side shield if warranted by the pole location.

Color temperature shall be between 3,000K and 4,000K.

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of light pole foundations shall be flush to finished grade. Top of footing shall be sloped to shed water.

Connections installed beneath paving shall be sleeved. Install ground fault protection at each pole.

Installation work shall be performed in conformity with USBC.

Lights shall be installed on a GFCI circuit.

Lights shall have photocell and time clock activation.

Life Cycle Expectations

A 5 year minimum warranty is required on street pole light fixtures.

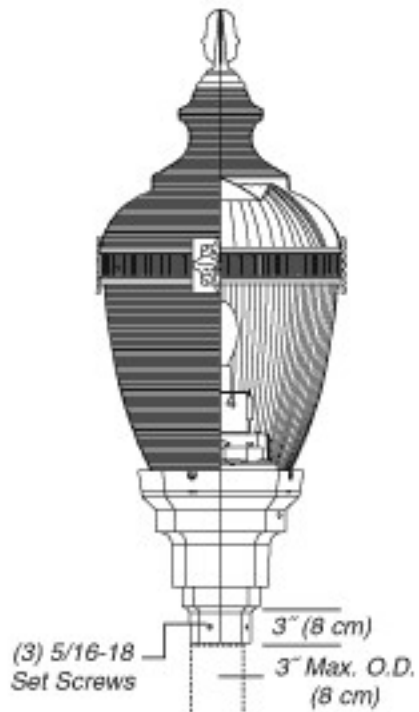
A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

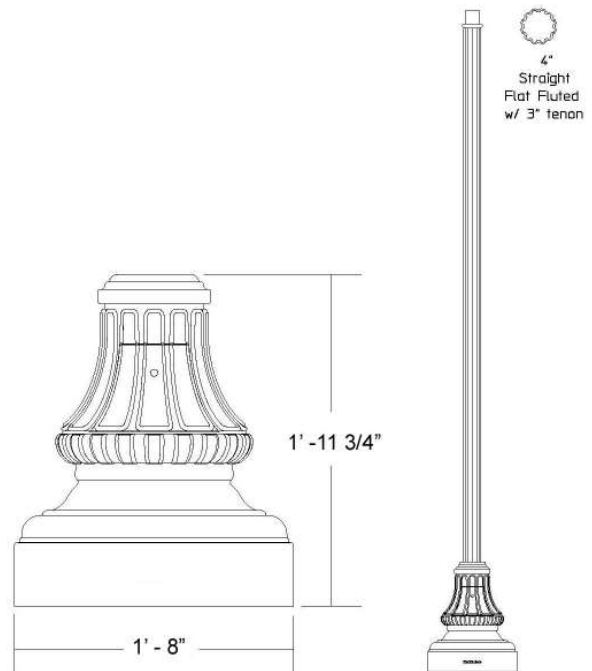


Fiberglass fluted base

LIGHTING | STREET POLE



Street light fixture



Virginia Dominion Power - Fiberglass fluted street pole

Image Footnotes
(1) <http://www.hadco.com>

MOVABLE FURNISHINGS

Purpose

Movable furnishings shall be located in parks where mobile furniture is desirable to create the most flexible arrangement possible.

General Information

Cafe table and chairs shall be grouped together in designated areas.

Adirondack style chairs shall be grouped together in designated areas.

Materials and Finish

Cafe tables and chairs shall be constructed of high density polyethylene or durable metal such as galvanized steel or other metals designed for commercial and exterior use. Metal finishing shall be a high-quality, permanently affixed powder coating, preferably done through a heat-finished process, or a high performance thermoplastic finish.

Cafe tables and chairs shall be green, blue, or gray.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Adirondack chairs shall be heavy-duty high density polyethylene construction and shall be green in color.

Materials and parts shall contain recycled materials.

Features

Cafe tables shall be square in shape with straight corner legs, no flared legs.

Cafe chair shall be stackable and not foldable.

Cafe chairs shall have a mix of 50% chair with arms and 50% chair without arms per park.

Installation

Furnishings shall be located in seasonal shade where possible.

City of Alexandria Logos or branding per design guidelines shall be applied to Adirondack chairs to prevent theft.

Life Cycle Expectations

A 1 year minimum warranty is required.

Furnishings are anticipated to require replacement after 5 years of normal and ordinary use.



Adirondack Chair

Intentionally Blank

PICNIC TABLE | OPTION 1

Purpose

Picnic tables shall be located in designated areas of parks.

General Information

One wheelchair accessible table is required for every five tables with a minimum of one per picnic area. Table top area shall be a minimum 36" wide.

The standard picnic table is the Victor Stanley, model A-365, or City approved equal.

The standard ADA compliant table is the Victor Stanley, model A-H-363, or City approved equal.

Materials and Finish

Tables shall be constructed of a sturdy, durable metal such as galvanized steel or other metals designed for commercial and exterior use.

Metal finishing shall be a high-quality, permanently affixed powder coating, preferably done through a heat-finished process, or a high performance thermoplastic finish.

Frames shall be dark green. Frames in Historic Districts shall be black.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Materials and parts shall contain recycled materials.

Tabletop shall be perforated slot pattern with umbrella hole.

Seating material shall be 2x3 maple recycled plastic slats.

Features

Picnic tables are available in multiple configurations.

Installation

Tables shall be permanently surface mounted with anchor bolts or consistent with the manufacturer's recommended in-ground method.

Picnic tables shall be accessible by hard surface paths.

The hard surface pad shall have a minimum 1% and 3% maximum cross slope, and provide 3 feet-4 inches minimum clearance on all sides and 5 feet minimum clearance on the ADA accessible side.

Tables shall be located in seasonal shade where possible.

A trash/recycling can shall be located within 15 feet, but 5 feet minimum from the picnic table.

Life Cycle Expectations

A 10 year minimum warranty is required.

Picnic tables are anticipated to require replacement after 15 years of normal and ordinary use.

PICNIC TABLE | OPTION 1



Picnic table



Accessible picnic table

Image Footnotes

(1) <http://www.victorstanley.com/>

PICNIC TABLE | OPTION 2

Purpose

Picnic tables shall be located in designated areas of parks.

General Information

Tables shall be tip resistant.

Table design shall permit 'walk through' access.

The standard picnic tables is the Victor Stanley CM-565 or City approved equal.

Materials and Finish

Tables shall be constructed of galvanized steel or other durable metals designed for commercial and exterior use.

Metal finishing shall be a high-quality, permanently affixed powder coating done through a electrostatic process, or high performance thermoplastic finish.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed to avoid corrosion and personal injury.

Frame legs shall be 2 $\frac{3}{8}$ inch minimum outside diameter, 11 gauge tubular steel welded into a single piece. Cross members shall be 1 $\frac{7}{8}$ inch minimum outside diameter tubular steel.

Frames shall be dark green. Frames in Historic Districts shall be black.

Table tops and seats shall be extruded, UV resistant, recycled high-density polyethylene. Color shall be maple or wood tone.

Features

Picnic tables are available in multiple configurations.

Benches can be configured as an 8 feet long table with 6 feet long benches for compliance with ADA.

Installation

Tables shall be surface mounted permanently with anchor bolts, or consistent with the manufacturer's recommended in-ground method.

Picnic tables shall be accessible by hard surface paths.

The hard surface pad shall have a minimum 1% cross slope and provide a minimum of 3 feet-4 inches of clearance on all sides and a minimum of 5 feet on the ADA accessible side.

Tables shall be located in seasonal shade where possible.

A trash/recycling can shall be located within 15 feet, but 5 feet minimum from the picnic table.

Life Cycle Expectations

A 10 year minimum warranty is required.

Picnic tables are anticipated to require replacement after 15 years of normal and ordinary use.



Picnic table

Image Footnotes

(1) <http://www.victorstanley.com/products/?mode=prodDetail&id=479&catId=2>

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PLAQUES | ADOPT-A-BENCH

02

Purpose

Community members and donors can adopt-a-bench through the Parknership Program. Personalized plaques are placed on adopted City benches.

General Information

The standard Adopt-a-Bench plaque size is 1.5"x 9" with 2 lines of text, and 2"x 9" with 3 lines of text. Plaque depth is $\frac{3}{16}$ ".

Lettering is raised copy, horizontal stroke, font style is Goudy Old Style.

Plaques shall have a single line border.

Related Standards: Bench | Natural Area, Bench | Park.

Materials and Finish

Plaques shall be cast bronze with leatherette finish.

Lettering and border shall be gold in color with a gloss black interior background.

Mounting hardware shall be black painted stainless steel.

Installation

For Park Benches, Adopt-A-Bench Plaques shall be installed center of backrest and 4" from top of the backrest. For Natural Area Benches, Adopt-A-Bench Plaques shall be installed center of backrest, top backrest slat.

Two pre-drilled mounting holes shall be located, $\frac{3}{4}$ " from side edges, center of plaque.

Fasten plaque to bench with bolts and nuts.

Life Cycle Expectations

A 1 year minimum warranty is required.

Plaques are anticipated to require replacement after 20 years.



Adopt-A-Bench Plaque



Adopt-A-Bench Plaque Layout

Intentionally Blank

RECEPTACLE | RECYCLING

Purpose

Recycling receptacles shall be located adjacent to activity centers, trail heads, exit points, and other high-traffic areas within and around parks/open space.

General Information

Recycling is mandated by the City of Alexandria.

The standard recycling receptacle is the Victor Stanley Ironsites model SD-42 (36 gallon) unit with side-door in powder-coated blue steel (RAL5010), or City approved equal.

The top band of recycling bins and lid shall be marked with "Recycle" in white lettering.

Corresponding plastic interior liners shall be used in all receptacles.

Related Standards: Receptacle | Ash/Coal, Receptacle | Trash.

Materials and Finish

Receptacles shall be constructed of sturdy, durable metal such as galvanized steel, ductile cast iron or other metals designed for commercial and exterior use.

Metal finishing shall be of high-quality, permanently affixed powder coating, done through a heat-finished process.

Features

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be imbedded or sealed.

Hinges, latches and moving parts shall be weather resistant and oiled at the time of purchase.

Receptacles shall contain a minimum of 70% post consumer recycled steel.

Installation

Receptacles shall be affixed to hard surfaces consistent with manufacturer recommendations.

A hard surface of 3 feet-4 inches by 3 feet-4 inches minimum accessible area shall be provided adjacent to accessible paths.

Receptacles shall be no taller, or mounted higher, than 4 feet above adjacent grade at the tallest point of the unit.

Placement of the receptacles shall not inhibit the monitoring or emptying of the contents.

The manufacturer's recommendations shall be followed to ensure the receptacles are installed level.

Life Cycle Expectations

A 10 year minimum warranty is required.

Receptacles are anticipated to require replacement after 20 years of normal and ordinary use.



Recycling receptacle

Intentionally Blank

RECEPTACLE | TRASH

Purpose

Trash receptacles shall be located adjacent to activity centers, trail heads, exit points, and other high-traffic areas within and around parks/open space.

General Information

Trash shall be contained in a durable metal, covered receptacle.

The City standard trash receptacles are Victor Stanley Ironsites model SD-42 (36 gallon) unit with side-door in powder-coated black steel (RAL9005), or City approved equal. The 'dome-top' style lid in black is required.

Corresponding plastic interior liners shall be used.

Recycling is mandated by the City of Alexandria. See "Recycling Receptacle" for appropriate container.

Related Standards: Receptacle | Ash/Coal, Receptacle | Recycling.

Materials and Finish

Receptacles shall be constructed of sturdy, durable metal such as galvanized steel, ductile cast iron or other metals designed for commercial and exterior use.

Metal finishing shall be of high-quality, permanently affixed powder coating, done through a heat-finished process.

Black is the required color for trash receptacles.

Metal products shall have smooth welds, joints and corners. Joint fasteners shall be embedded or sealed.

Hinges, latches and moving parts shall be weather resistant and oiled at the time of purchase.

Receptacles shall contain a minimum of 70% post consumer recycled steel.

Installation

Receptacles shall be affixed to hard surfaces consistent with manufacturer recommendations.

A hard surface of 3 feet-4 inches by 3 feet-4 inches minimum accessible area shall be provided adjacent to accessible paths.

Receptacles shall be no taller, or mounted higher, than 4 feet above adjacent grade at the tallest point of the unit.

Placement of the receptacles shall not inhibit the monitoring or emptying of the contents.

The manufacturer's recommendations shall be followed to ensure the receptacles are installed level.

Life Cycle Expectations

A 10 year minimum warranty is required.

Receptacles are anticipated to require replacement after 20 years of normal and ordinary use.



Trash receptacle

Intentionally Blank

WHEEL STOP

02

Purpose

Pre-fabricated wheel stops shall be installed at vehicular parking areas located within park facilities. Wheel stops shall be used to define edges of parking spaces and to prevent vehicle encroachment.

General Information

Wheel stop size shall be 6 feet in length and 4 inches minimum vertical height.

One wheel stop shall be provided for each designated parking space. Wheel stop shall be located 3 feet minimum horizontal distance from the adjacent walkway/path.

Materials and Finish

Wheel stops shall be pre-fabricated concrete or gray in color, or City approved equal.

Wheel stops shall contain recycled materials.

Installation

Install wheel stops consistent with manufacturer's recommendations.

Wheel stops shall be installed on asphalt or other hard surface.

When installed in parking areas of compacted stone or other loose material, wheel stops shall be mounted on solid leveling pads at finish grade, with rebar spikes secured into subgrade.

Stops shall be secured with a minimum of 3 rebar spikes sunk into pavement and subgrade, consistent with manufacturer recommendations.

Installation of wheel stops shall not impede access of wheelchairs or other mobility devices through parking lots or to pathways.

Life Cycle Expectations

A 5 year minimum warranty is required.

Wheel stops are anticipated to require replacement after 20 years of normal and ordinary use.



Wheel stop

Intentionally Blank

CHAPTER 3

FENCES AND WALLS

Fence | Backstop
Fence | Chain Link
Fence | Gates/Latches
Fence | Metal
Fence | Mow Strip
Fence | Netting System
Fence | Paddock
Fence | Post Anchoring Systems
Fence | Solid Wood Board
Fence | Temporary Installations
Wall | Concrete Retaining
Wall | Segmental Retaining

Intentionally Blank

FENCE | BACKSTOP

Purpose

Backstops shall be used to separate athletic activities and surrounding areas.

General Information

Backstops shall be permanent and flared/winged structures installed on diamond fields.

Backstop dimensions include 16 feet minimum horizontal wings (each), 20 feet minimum horizontal center panel, 12 feet minimum vertical height fence at the wings and 20 feet minimum vertical height at center panel.

Related Standards: Field Diagram | Baseball, Field Diagram | Softball, Track/Warning Track, Infield Mix, Fence | Mow Strip.

Materials and Finish

Backstop chain link fabric mesh shall have a core wire diameter of 6 gauge for the wings. Fabric mesh shall have a core wire diameter of 6 gauge for the center panels. The diamond mesh shall have 2 inch openings throughout, without knots or ties except as knuckling on the top and bottom of the fabric. Backstops shall include bottom rails.

Fabric shall be matte woodland/dark green in color. Within historic districts fabric shall be matte black in color.

Chain link fabric shall be PVC coated, Class 2b, thermally fused and bonded.

Backstop posts shall be 6 inches outside diameter, Schedule 40.

Fence panels over 6 feet in vertical height shall have a middle rail. Mid-rails/braces shall be 1½ inch outside diameter.

Backstops shall include pressure treated 'kick boards'. Kick boards shall be 2 inch x 12 inch x 2 foot vertical height at center panels and ¾ inch thick plywood on wing panels. Kick boards shall be primed and painted to match the fence.

Installation

Fence posts and supports shall be located outside the field of play for athletic facilities.

Posts shall be permanently mounted in concrete footings. Top of footing shall be sloped to shed water.

Footings shall be installed flush to adjacent finished grade.

Footings and supports shall be designed and sealed by a professional engineer.

Knuckling of fence fabric shall be 1½ to 2 inches vertical height above the surrounding finish grade.

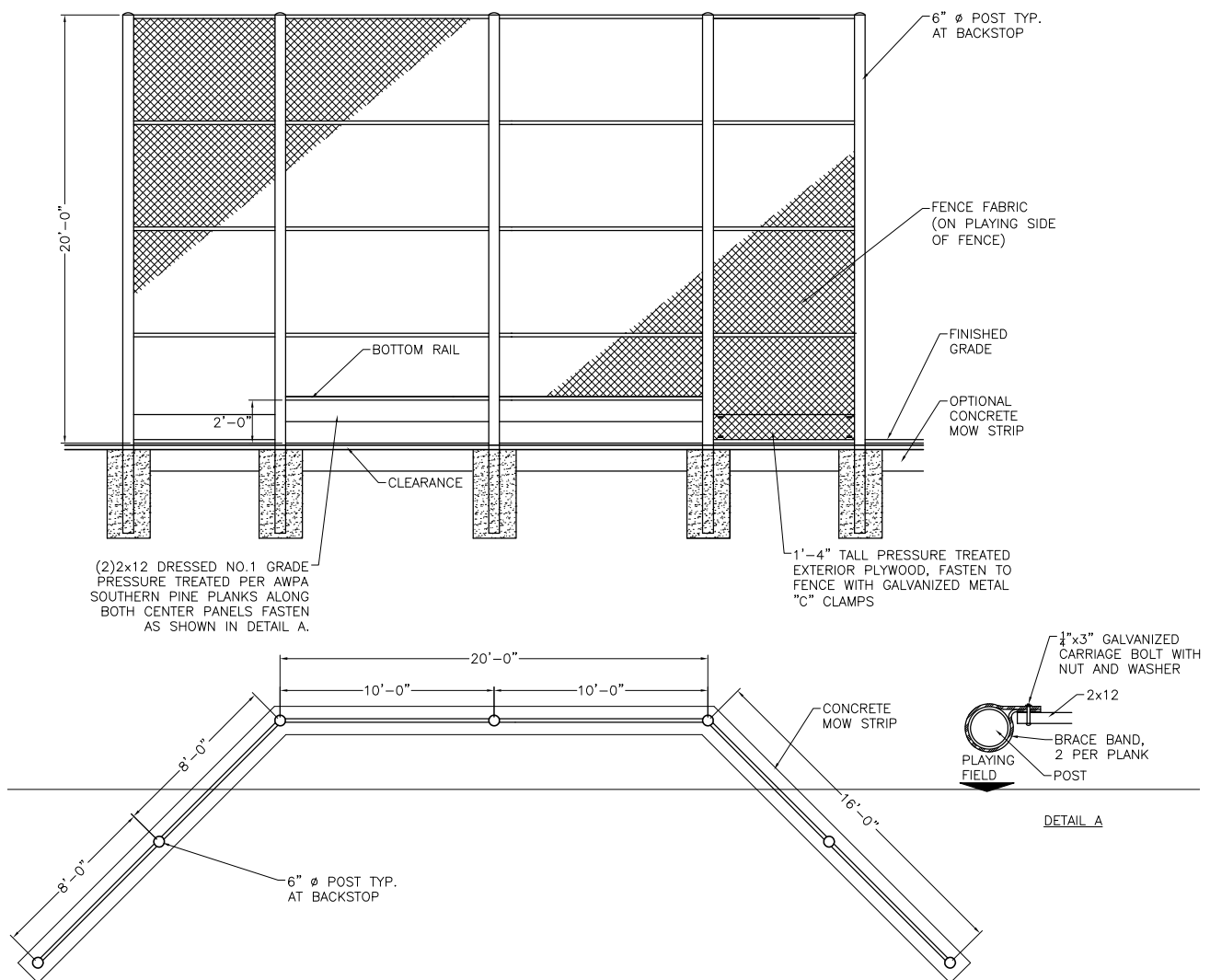
Life Cycle Expectations

A 1 year minimum warranty is required on metal framework.

Kick boards are anticipated to require replacement after 1 year of normal and ordinary use.

Backstop structures are anticipated to require replacement after 15-20 years of normal and ordinary use.

FENCE | BACKSTOP



Chain link backstop

Not to scale



Chain link backstop

FENCE | CHAIN LINK

Purpose

Chain link fences shall be used to separate athletic fields, ball courts, playgrounds and active recreation play areas from adjacent uses, and to secure property boundaries.

General Information

Fences shall be 3 feet-6 inches maximum height (playground and use-separation fences), 6 feet (field perimeters), or 12 feet (ball courts). A Special Use Permit is required for fences exceeding 6 feet in height. Additional temporary netting shall be 15 feet maximum vertical height from adjacent grade without a Special Use Permit.

Fenced park areas greater than one half acre shall have two entry points minimum.

Fences shall not prevent movement of wheelchairs and other devices along accessible paths.

Pedestrian entrances shall be 4 feet minimum horizontal width.

Related Standards: Fence | Mow Strip, Netting System, Fence | Gates/Latches.

Materials and Finish

Chain link fences shall be matte woodland/dark green in color. Within historic districts, chain link fences shall be matte black in color.

Chain link fabric shall be PVC coated, Class 2b, thermally fused and bonded.

Chain link fabric shall have a core wire diameter of 9 gauge. The diamond mesh shall be 2 inches without knots or ties, except as knuckling on the top and bottom of the fabric.

Fence end and corner posts shall be 4 inches outside diameter up to 8'-0" tall, fence end and corner posts that exceed 8'-0" tall shall be 6 inches outside diameter. Line posts shall be 2½ inches outside diameter. Rails/braces shall be 1½ inch outside diameter.

Chain link fence shall include a top and bottom rail. Fences over 6 feet in vertical height shall include a middle rail.

Features

Fences surrounding diamond field outfields shall use a "Poly-Cap" system on the top rail.

Fence with wind screens shall have sufficient footings to handle windloads.

Fence shall include a concrete or stonedust mow strip.

Installation

Fence posts and supports shall be located outside the field of play for athletic facilities.

Fences with 6" diameter posts shall be permanently mounted into concrete footings, 1 foot-6 inches minimum diameter, 2 feet-6 inches minimum depth. Fences with 4" diameter posts shall be permanently mounted into concrete footings, 1 foot minimum diameter, 2 feet-6 inches minimum depth.

Footings shall be installed flush to adjacent finish grade. Top of footing shall be sloped to shed water.

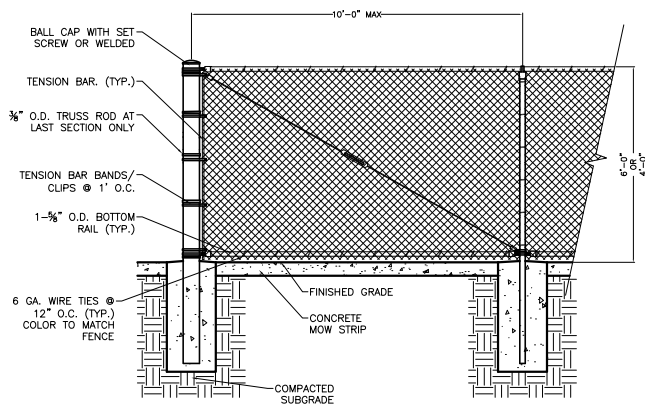
Fence fabric knuckling shall be installed 1½ to 2 inches vertical height above surrounding finish grade.

Life Cycle Expectations

A 1 year minimum warranty is required.

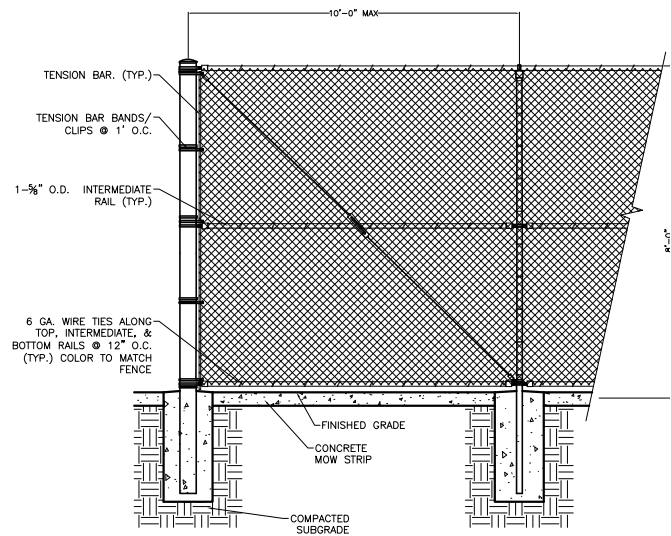
Chain link is anticipated to require replacement after 15-20 years of normal and ordinary use.

FENCE | CHAIN LINK



Chain link fence 4'-6'

Not to scale



Chain link fence 8'-10'

Not to scale



Chain link fence

FENCE | GATES / LATCHES

Purpose

Chain link gates shall be used to secure fenced in areas. Single gates shall have a lever style latch and double gates shall have a fork style latch.

General Information

Pedestrian gates shall be single gates 4 feet minimum horizontal width. Gate latch shall be lever style.

Maintenance access gates shall be double gates a total of 16 feet horizontal width. Width variations shall be approved by the Director of Recreation, Parks and Cultural Activities.

Dog parks shall include double entrance gates.

Fenced park areas greater than one half acre shall have two entry points minimum.

Related Standards: Fence | Chain Link, Fence | Metal

Materials and Finish

Chain link gates shall be matte woodland/dark green in color. Within historic districts, chain link fences shall be matte black in color.

Lever style latches shall be hot dipped galvanized steel. Latch housing shall match gate and fence color. Latch shall be non-painted steel.

Metal products shall have smooth welds, joints and properly treated corners.

Features

Double gates shall have a lockable fork latch, with a cane rod.

Gates shall include a 2 foot horizontal width threshold the full length of the gate and adjacent posts.

Installation

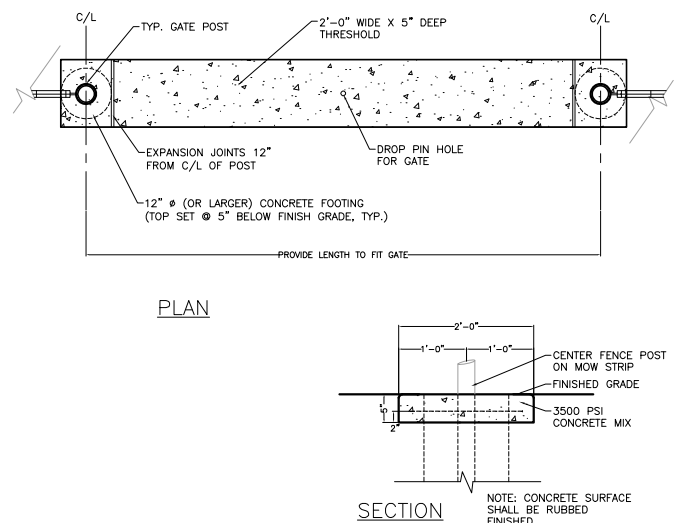
Gate hinges shall be attached to gate posts via clamps and pins that ensure hinges do not rotate on the post.

Lever style housing shall be surface mounted to gate frame and secured by socket screws. Chain link tension bar adapter shall be install around lever hardware. Keeps shall be surface mounted on gate post with socket screws, rounded posts require adapters.

Life Cycle Expectations

A 1 year minimum warranty is required.

Gates and latches are anticipated to require replacement after 10-15 years of normal and ordinary use.



Concrete threshold

Not to scale



Double gate fork latch



Gate latch

Image Footnotes

<https://www.locinoxusa.com>

FENCE | METAL

Purpose

Metal fencing shall be used in historic districts and special conditions of park use.

General Information

Fences shall be 6 feet maximum vertical height. A Special Use Permit is required for fences exceeding 6 feet in height.

Fences shall be 3 feet-6 inches minimum vertical height where installed for use-separation.

Fences shall not prevent movement of wheelchairs and other devices along accessible paths.

Pedestrian entrances shall be 4 feet minimum horizontal width.

Materials and Finish

Metal fences shall be black in color.

Fencing shall consist of 2½ inch square line posts with a 14 gauge wall thickness, constructed of steel or other durable metal designed for exterior use.

Pickets shall be ¾ inch, 18 gauge bars constructed of steel or other durable metal designed for exterior use.

Corner and terminal posts shall be square steel tubing 3 inches square, with a 12 gauge wall thickness.

Features

Decorative post caps shall include a newell post ball cap sized to fit post top, secured with hardware.

Fences shall include ornamental steel rings at a dimension of 3⅞ inches outside dimension or sized to fit picket spacing.

Access gates shall include a lockable fork latch. Double gates shall include a cane rod. Gates shall include diagonal bracing.

Pointed pickets shall not be used.

Installation

Shop drawings for fabrication are required to be approved by the Director of Recreation, Parks and Cultural Activities.

Fences shall be permanently mounted in concrete footings.

Footings shall be installed flush to adjacent finish grade. Top of footing shall be sloped to shed water.

Bottom of pickets shall be installed 1½ to 2 inches vertical height from the surrounding finish grade.

Fence panels shall step panel-to-panel, not slope, with the topography of the site.

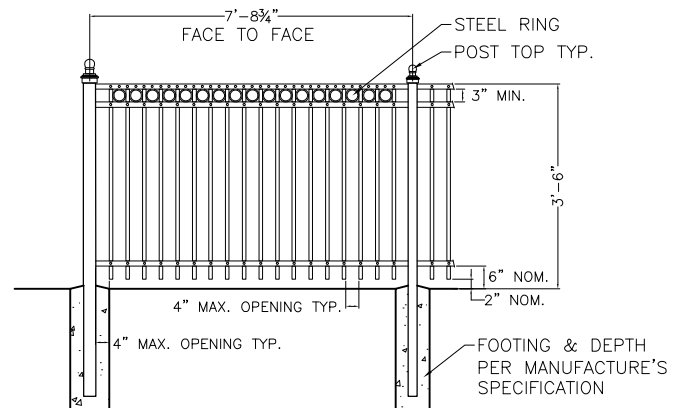
Life Cycle Expectations

A 10 year minimum warranty is required.

Metal fencing is anticipated to require replacement after 20-30 years of normal and ordinary use.



Metal fence



Metal fence

Not to scale

Intentionally Blank

FENCE | MOW STRIP

03

Purpose

Mow strips shall be used as a landscape maintenance tactic to prevent weeds and grasses from growing directly underneath fences.

General Information

Mow strip width shall be fence post size/diameter plus 6 inches to 8 inches on each side, and a minimum total width of 14 inches. Alternative dimensions are subject to approval by the Director of Recreation, Parks, and Cultural Activities.

Fencing and posts shall be centered on mow strip.

Materials and Finish

Mow strips shall be concrete or stonedust with a containment edge or border.

Concrete mow strip shall be poured in place with a swept broom finish.

Stonedust mow strip fill material shall be #10 washed gravel aggregate. Material shall be clean and free of sand and organic materials.

Installation

Stone dust aggregate shall be installed at 5 inches minimum vertical depth over a non-organic non-woven geotextile filter fabric over compacted subgrade with metal edging.



Concrete Mow Strip

Not to scale

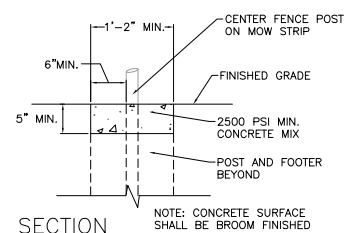
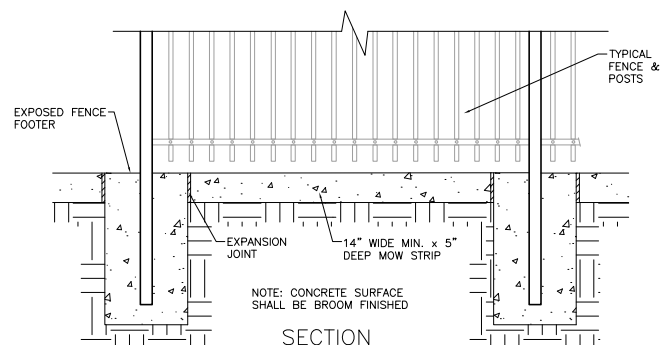
Concrete mow strip shall be 5 inches minimum vertical depth.

Prior to installation, subgrade shall be level at grade line and free of weeds, trash, large rocks and other debris.

Life Cycle Expectations

Aggregate fill materials are anticipated to require annual replacement based on normal and ordinary use.

Concrete is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.



Concrete Mow Strip

Not to scale

Intentionally Blank

FENCE | NETTING SYSTEM

Purpose

Stationary field netting systems shall be used as temporary or permanent flexible barriers to enhance separation of athletic fields, ball courts, playgrounds and active recreation play areas from adjacent uses.

General Information

Temporary netting shall be 15 feet maximum vertical height from adjacent grade without a Special Use Permit.

Related Standards: Fence | Chain Link.

Materials and Finish

Field netting shall be #36 knotted black nylon. Strands shall have a 200 pound minimum breaking strength.

Netting system shall include 4 inch outside diameter posts. Total post height of the netting and fence shall be 15 feet from adjacent finish grade with a maximum height of 30 feet. Posts shall be spaced 20 feet on-center maximum.

Netting system shall include a top cable connected to each pole, and include adjustable turnbuckles on individual cable runs.

Netting fabric shall include grommets attached via metal clips to the cable and fence at intervals of 1 foot-6 inches on-center continuous. The fabric shall be attached to the poles by nylon lacing twine. Strands shall have a 200 pound minimum breaking strength.

Features

Netting system may be installed in absence of a corresponding metal frame. This system requires provision of a top and bottom cable system. The bottom cable system shall be installed 2 vertical inches above the surrounding finish grade.

Installation

Netting system posts shall be permanently mounted into concrete footings per manufacturer recommendations and per building code requirements. Top of footing shall be sloped to shed water.

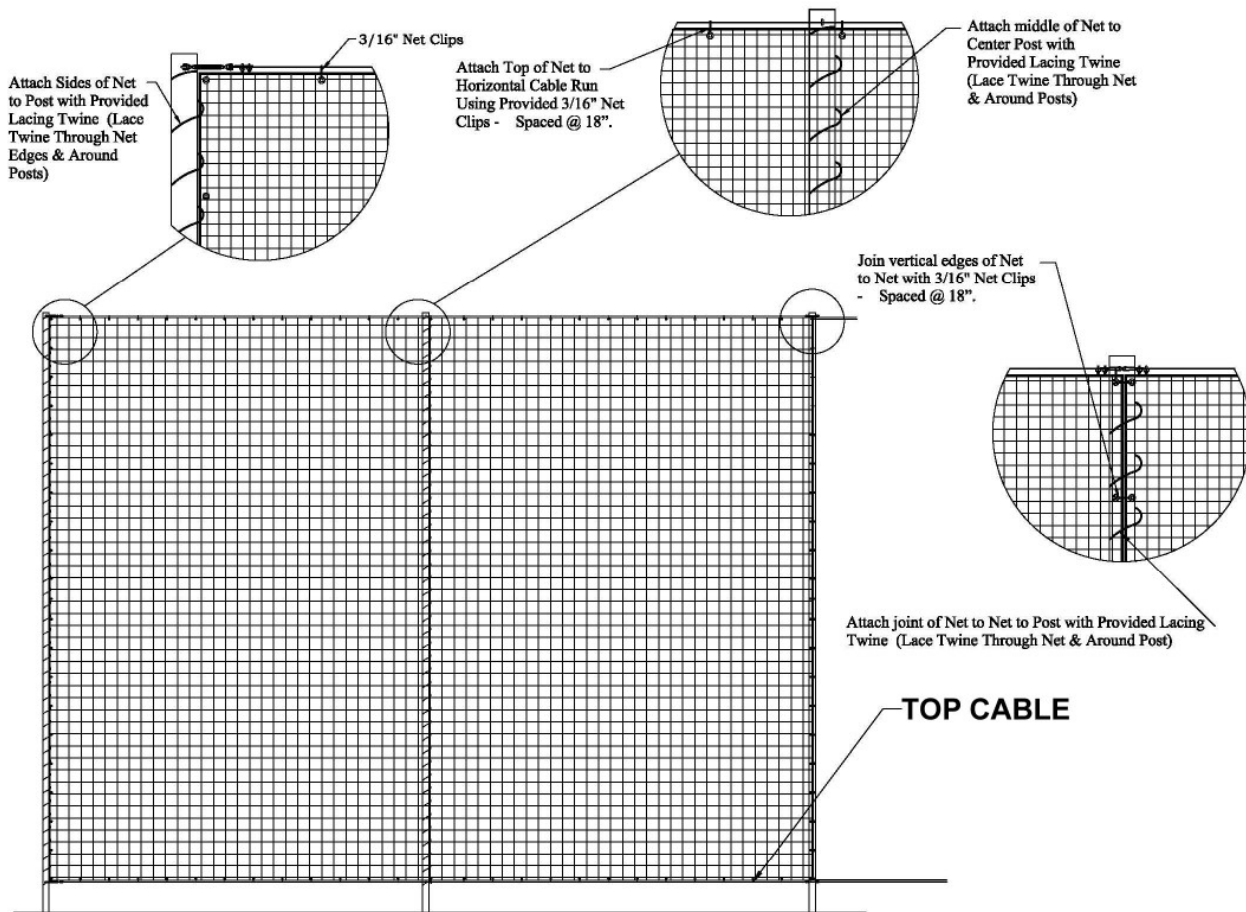
Footings shall be installed flush to surrounding grade.

Life Cycle Expectations

A 3 year minimum warranty is required.

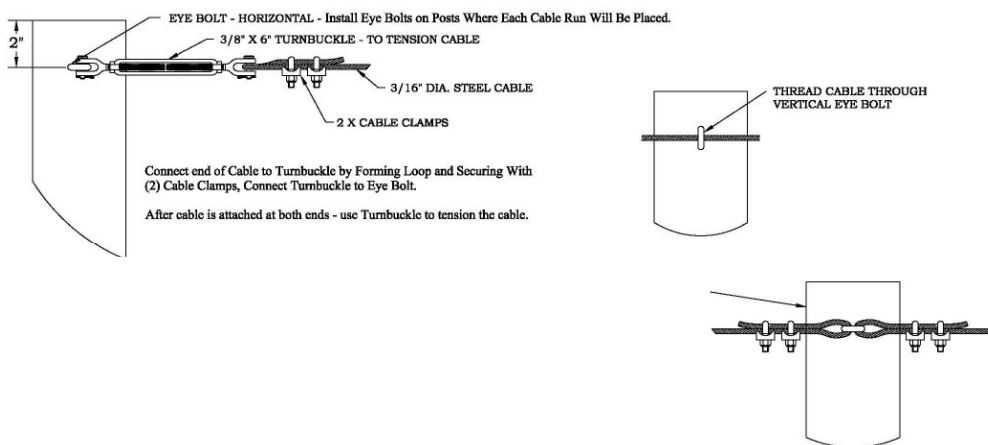
Netting is anticipated to require replacement after 5 years of normal and ordinary wear.

FENCE | NETTING SYSTEM



(1) Fence netting system

Not to scale



Fence netting system

Not to scale

Image Footnotes

(1) <http://www.ballfabrics.com/sports-netting/category/sports-netting>

FENCE | Paddock

Purpose

Paddock fence shall be used on sites with historic context and natural areas.

General Information

Paddock fence shall be constructed of vertical posts supporting two horizontal rails.

Paddock fence shall be 3 feet-6 inches maximum vertical height from post top to adjacent finished grade

Fences shall not prevent movement of wheelchairs and other devices along accessible paths.

Pedestrian entrances shall be 4 feet minimum horizontal width.

Vehicular entrances shall be 12 feet minimum horizontal width.

Materials and Finish

Lumber materials shall be pressure-treated wood or composite resin, earth tone or brown color.

Pressure-treated lumber shall not be treated with Chromated Copper Arsenate (CCA).

Pressure-treated lumber shall be Alkaline Copper Quaternary (ACQ) or Copper Borate Azole (CA) type.

Where Alkaline Copper Quaternary (ACQ) lumber is used, fasteners shall be galvanized or stainless steel.

Posts shall be 4 inches by 4 inches. Rails shall be 4 inches by 4 inches, taper splits (nominal dimensions).

Installation

Fences shall be permanently mounted in concrete footings or 57 stone in Resource Protection Areas. Footing shall be 1 foot-6 inches minimum diameter, and 2 feet-6 inches minimum depth.

Footings shall be flush to adjacent finish grade. Top of footing shall be sloped to shed water.

Fences shall permit view of parks and activity centers from the public right-of-way.

Fences shall step, not slope, with the topography of the site.

Life Cycle Expectations

A 1 year minimum warranty is required.

Paddock fence is anticipated to require replacement after 5 years of normal and ordinary wear.



Paddock fence

Intentionally Blank

FENCE | POST ANCHORING SYSTEMS

Purpose

A fence post anchoring system shall be used for retaining and landscape walls where a fence or rail is required.

General Information

Walls 2 vertical feet in height from adjacent finish grade require a fence or rail.

The standard post system is the SLEEVE-IT System by Strata Systems, utilizing the cantilever design, or City approved equal.

Related Standards: Walls | Segmental Retaining , Fence | Chain Link.

Materials and Finish

Cantilever grid system shall be approximately 2 feet wide by 3 feet horizontal distance from the fence post.

Sleeve system shall be plastic, and integrated with the cantilevered mesh.

Sleeve and post footing top shall be flush to finish grade or hidden from view.

Features

Sleeve lids/covers shall be installed during construction and prior to installation of the fence post and footing.

Installation

Install system in coordination with retaining wall or landscape wall construction.

Include a 6" mow strip in front of the wall.

Install system, including fence post and fence post footing, per fence manufacturer's recommendations and as coordinated with wall reinforcing.

Washed stone millings shall be installed between the back of wall cap to 6 inches on the opposite side of the fence fabric. Stone millings shall be 4 inches minimum vertical depth and placed over continuous underlayment of filter fabric.

Life Cycle Expectations

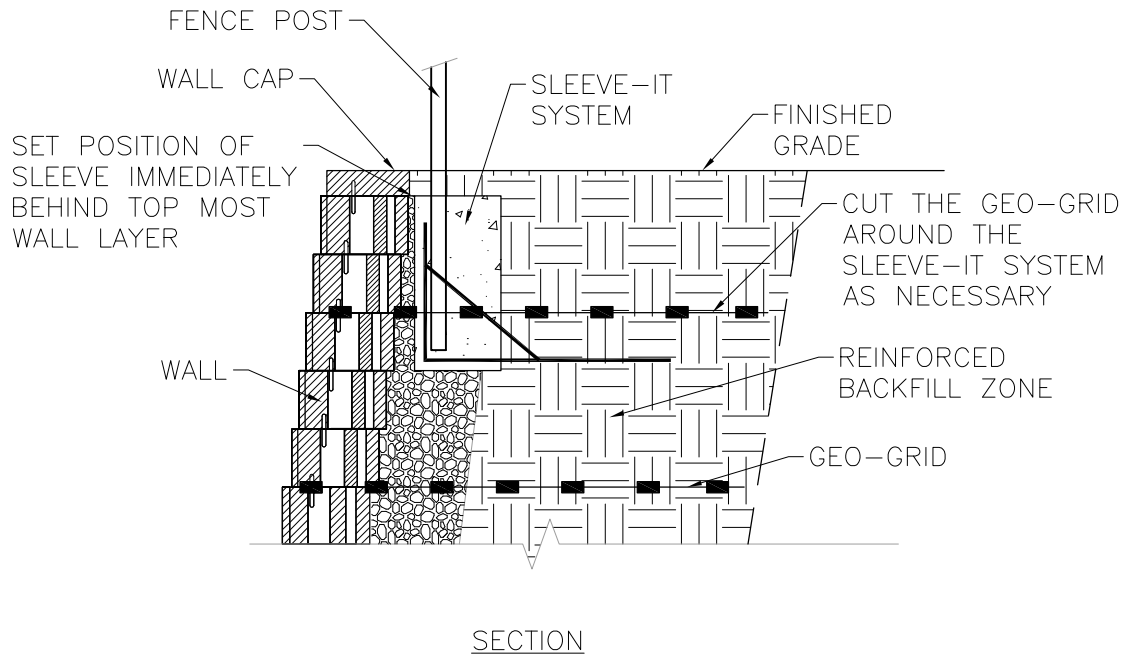
A 5 year minimum warranty is required.

Fence post anchoring systems shall require replacement at the time of wall reconstruction.



Fence post anchoring system for walls

FENCE | POST ANCHORING SYSTEMS



Fence post anchoring system (1)

Not to scale

Image Footnotes

(1) <http://www.geogrid.com/sleeve-it.html>

FENCE | SOLID WOOD BOARD

Purpose

Solid board fences shall be used to create a physical/visual barrier between properties.

General Information

Solid board fences shall be 6 feet maximum vertical height.

Solid board fences shall consist of 4 inch by 1 inch or 6 inch by 1 inch (nominal dimensions) mounted perpendicular to finish grade. Provide horizontal rails continuous; top, middle, and bottom.

Board to board spacing shall not exceed $\frac{1}{8}$ inch.

Support posts shall be 6 inch by 6 inch (nominal sizes) square posts throughout.

Gates shall not be installed in solid board fencing.

Fences shall not prevent movement of wheelchairs and other mobility devices along accessible paths.

Pedestrian fence openings shall be 4 feet minimum horizontal dimension.

Materials and Finish

Lumber materials shall be pressure-treated wood.

Metal fence fasteners/materials shall be galvanized steel or aluminum treated for exterior, commercial use.

Pressure-treated lumber shall not be treated with Chromated Copper Arsenate (CCA).

Pressure-treated lumber shall be Alkaline Copper Quaternary (ACQ) or Copper Borate Azole (CA) type.

When Alkaline Copper Quaternary (ACQ) lumber is used, fasteners shall be galvanized or stainless steel.

Post tops shall be finished with a weather resistant metal cap sized to fit the post top.

Fences shall not have decorative lattice or other patterns.

Installation

Fences shall be permanently mounted into concrete footings 1 foot-6 inches minimum diameter, 2 feet-6 inches minimum depth. Top of footing shall be sloped to shed water.

Footings shall be flush to surrounding finish grade.

Fences shall not completely obstruct the view of parks and activity centers from the public right-of-way.

Board bottoms shall be at least $1\frac{1}{2}$ to 2 inches vertical height from the surrounding finish grade.

Fences shall step, not slope, with the topography of the site.

When used to identify or mark property boundaries, the property lines shall be surveyed and verified prior to installation.

Life Cycle Expectations

A 1 year minimum warranty is required.

Solid board fences are anticipated to require replacement after 10 years of normal and ordinary wear.



Solid wood board fence

Intentionally Blank

FENCE | TEMPORARY INSTALLATIONS

Purpose

Temporary fencing shall be used to separate temporary hazardous conditions, control pedestrian traffic flow, identify boundaries, and address other short-term control needs.

General Information

Fence height shall be 2 vertical feet minimum to 6 vertical feet maximum, including above-grade posts and fabric.

The standard temporary fences are Tenax Sentry Secura Fence by Grainger, and Duro Fence by E.C. Shepard, or City approved equal.

Fences shall not prevent movement of wheelchairs and other devices along accessible paths.

Fence openings shall be 4 feet minimum horizontal dimension.

Materials and Finish

Fences shall be orange or black in color.

Temporary fencing shall be constructed of welded wire construction or polypropylene plastic mesh.

Wire mesh shall be coated with durable PVC, thermally fused and bonded.

Wire mesh shall be $\frac{3}{8}$ inch thick with openings $1\frac{1}{4}$ inch by 2 inches.

Polypropylene plastic mesh openings shall be $1\frac{1}{4}$ inch square.

Polypropylene plastic shall be UV resistant.

Metal fence posts components shall be corrosion resistant.

Installation

Temporary fencing must be secured according to manufacturer's recommendations, including post installation and attachment.

Fencing shall close on itself or return around an end post to create a finished end suitable for adjacent traffic.

Life Cycle Expectations

A 1 year minimum warranty is required.

Temporary fence is anticipated to be recycled after 10 uses.

FENCE | TEMPORARY INSTALLATIONS



Orange polypropylene mesh temporary fence

Image Footnotes

(1) <https://www.grainger.com>

WALLS | CONCRETE RETAINING

Purpose

Concrete retaining walls shall be used in locations requiring grade retention.

General Information

Concrete materials including Portland cement, admixtures, aggregates and reinforcement shall comply with ASTM C-150 standards for Type I concrete.

Retaining walls more than 2 feet vertical height require a City of Alexandria building permit.

Materials and Finish

Design mixes shall be appropriate for project conditions, weather, site test results and materials.

Exterior concrete pavement shall be finished with a light broom finish unless otherwise specified.

Concrete shall be tested for compressive strength, slump and air content.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Reinforcement shall be included as determined by the design engineer for strength.

Concrete may include integral color throughout the entire pavement section or decorative aggregate as determined by the Director of Recreation, Parks and Cultural Activities.

Walls 2 vertical feet and higher shall be combined with a rail/fence system.

Installation

Concrete shall be designed with expansion and troweled or saw-cut control joints.

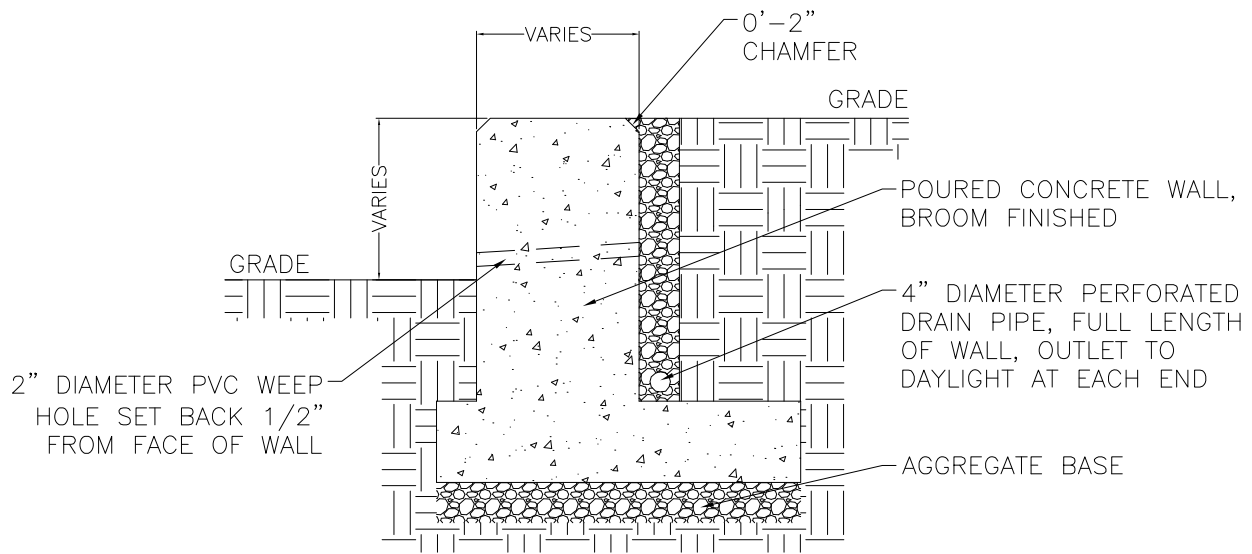
Forms and form release agents shall be appropriate to the concrete mix and finish, and shall not impair subsequent treatment of the concrete surfaces.

The temperature of new concrete shall not be allowed to fall below 50 degrees Fahrenheit (10 degrees Celsius) during the curing period. Walls shall be installed on prepared leveling base consistent with manufacturer's recommendations for the base materials and details.

Walls shall be inspected by the appropriate permitting authority.

Life Cycle Expectations

Concrete retaining walls are anticipated to require replacement after 40-50 years or more of normal and ordinary wear.



Poured in place concrete wall construction

Not to Scale

WALLS | SEGMENTAL RETAINING

Purpose

Segmental retaining walls shall be used in locations requiring grade retention.

General Information

Retaining walls greater than 2 feet vertical height require a City of Alexandria building permit.

Materials and Finish

Segmental retaining walls shall be constructed of concrete units, with a secure connection between courses.

Walls shall be graffiti resistant or be finished with a graffiti resistant coating.

Features

Segmental wall unit faces shall be straight or split.

Walls shall have a secured cap course of matching finish, color and material.

Unit blocks shall be a neutral color.

Provide finished edges on all exposed sides of corner units.

Walls greater than 2 feet vertical height shall be combined with a rail/fence system.

Installation

Walls shall be installed on prepared subgrade, base materials and foundation as recommended by the manufacturer.

A minimum of two courses of block shall be installed below finish grade.

Install drainage materials and reinforcing as required by the wall design and height.

Walls shall be inspected by the City of Alexandria and certified by the installer.

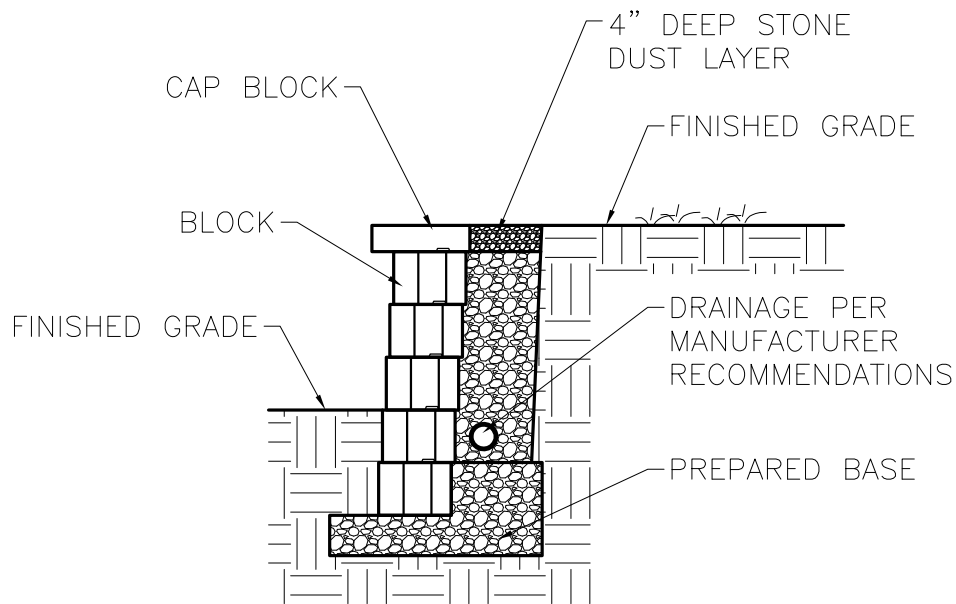
Include a 6" mow strip in front of the wall.

Life Cycle Expectations

A 3 year minimum warranty is required.

Segmental retaining walls are anticipated to require replacement after 40 years or more of normal and ordinary wear.

WALLS | SEGMENTAL RETAINING



Segmental retaining wall section

Not to scale



Segmental retaining wall

CHAPTER 4

SURFACING

Aggregates

Asphalt | Pedestrian

Asphalt | Vehicular

Concrete | Pedestrian

Concrete | Vehicular

Court Surfacing | Color Coat

Court Surfacing | Lining

Edging

Infield Mix

Permeable Surfacing | Unit Pavers

Pervious Surfacing | Asphalt

Pervious Surfacing | Concrete

Pervious Surfacing | Flexible Paving

Play Area Surfacing | Engineered Wood Fiber

Play Area Surfacing | Poured in Place Rubber

Play Area Surfacing | Rubber Tile System

Sand Mixes | Volleyball

Sports Field | Lining

Synthetic Turf | Sports Field

Synthetic Turf | Playspace

Track/Warning Track

Trails | Natural Areas

Unit Pavers

Wood Chips and Mulches

Intentionally Blank

AGGREGATES

04

Purpose

Aggregates shall be used as a porous surface for pedestrian and vehicular use.

General Information

Aggregate shall be tested according to current ASTM standards including particle size, standard proctor potential and sieve analysis.

Material shall have a containment edge or border.

Related Standards: Edging.

Materials and Finish

Materials shall be washed processed aggregate.

Acceptable aggregates include washed gravel fines, such as #10 stone for pedestrian use, and #57 gravel for vehicular use.

Material shall be clean and free of organic materials.

Installation

Aggregates shall be installed on non-woven geotextile filter fabric (minimum 4oz.) over compacted subgrade.

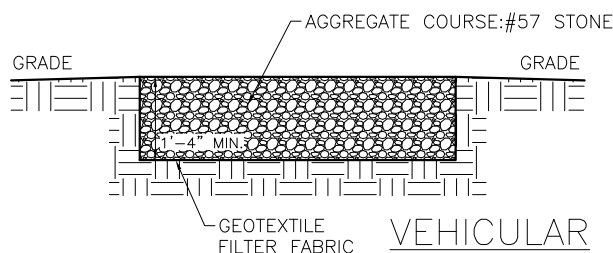
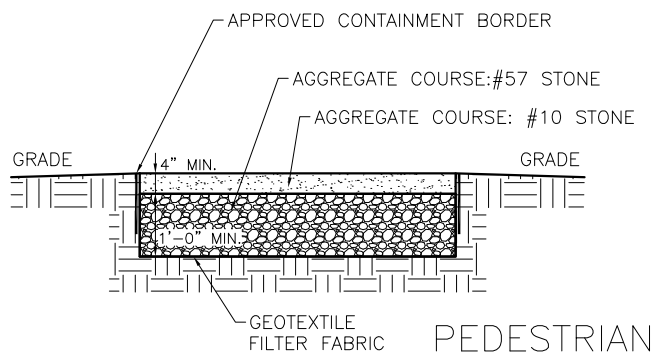
Prior to installation, subgrade shall be consistent in grade and free of weeds, trash and other debris.

Finer aggregates shall be compacted with a vibrating plate.

#10 stone shall be installed at 4 inches minimum vertical depth.

Life Cycle Expectations

Aggregates are anticipated to require annual replacement based on normal and ordinary use.



Stone dust trail

Intentionally Blank

ASPHALT | PEDESTRIAN

04

Purpose

Asphalt paving materials shall be provided for non-vehicular circulation where a smooth and a joint-free surface is desired.

General Information

Asphalt material shall be dense, hot-laid and plant-mixed.

Materials shall meet current ASTM standards for asphalt cement and aggregates.

Materials and Finish

Asphalt paving sections for pedestrian traffic may typically include 2 inches of asphalt on top of 6 inches of crushed stone, over subgrade compacted to 95% proctor density.

Asphalt surface shall be smooth, continuous and free of pulls, tears and deflections.

Paving strips shall be 10 feet horizontal dimension minimum, or full width of the travelway.

Paving shall be flush to adjacent grade.

Design mixes shall be appropriate for project conditions, weather, test results and materials.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Striping shall meet the requirements of Manual on Uniform Traffic Control Devices (MUTCD) Standards, and shall be retroreflective thermoplastic.

Asphalt paths may include a 6 inch wide concrete shoring band or approved alternate edging.

21B material may include an underdrain dependant upon the geotechnical analysis and soil conditions.

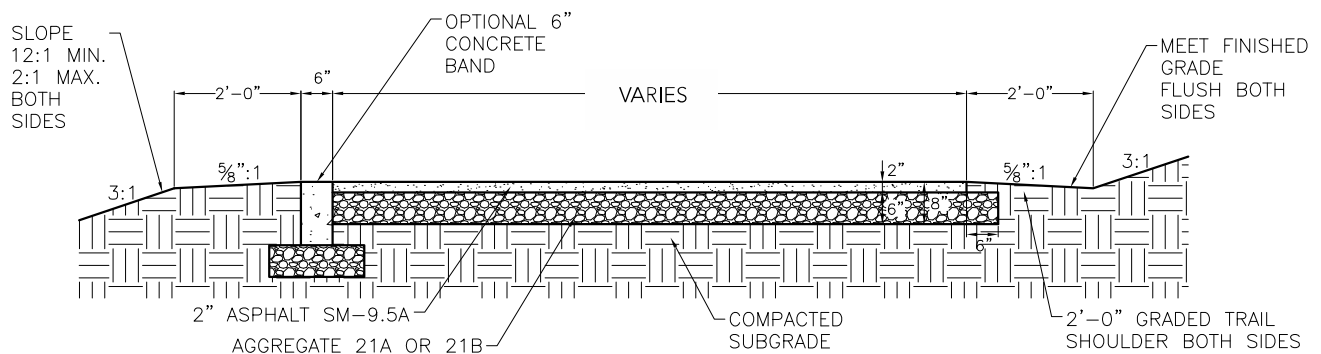
Accessible paved areas shall be graded at 1.5% minimum to 4.5% maximum, with a 2% cross slope.

Non-accessible paths shall not exceed 12% slope.

Stamped asphalt patterns shall be approved by the Director of Recreation, Parks and Cultural Activities and the Director of Transportation and Environmental Services.

Pavement surface may be crowned in the middle or sloped to one side. Valley drainage shall not be permitted.

Bicycle and multi-use trails require a 5 feet minimum pavement width for one way travel and 8 feet minimum with for two way travel. Pedestrian trails require a 6 feet minimum pavement width.



Asphalt cross section

Not to scale

ASPHALT | PEDESTRIAN

Installation

Geotechnical analysis is required to establish a pavement section.

Life Cycle Expectations

Pavement is anticipated to require replacement after 15-20 years of normal maintenance and ordinary use.



Pedestrian use application

ASPHALT | VEHICULAR

Purpose

Asphalt paving materials shall be provided for exterior vehicular circulation and staging where a smooth and a joint-free surface is desired.

General Information

Asphalt material shall be dense, hot-laid and plant-mixed.

Materials shall meet current ASTM standards for asphalt cement and aggregates.

Materials and Finish

Asphalt paving sections shall be designed by a licensed geotechnical/professional engineer.

The thickness of sub-base, base, and wearing course shall be designed using the current VDOT Pavement Design Guide for Subdivision and Secondary Roads in Virginia (2018).

Values of California Bearing Ratios used in the design shall be determined by field and/or laboratory tests.

Asphalt surface shall be smooth, continuous and free of pulls, tears and deflections.

Paving strips shall be 10 feet horizontal dimension minimum.

Paving shall be flush to adjacent grade.

Design mixes shall be appropriate for project conditions, weather, test results and materials.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Striping shall meet the requirements of Manual on Uniform Traffic Control Devices (MUTCD) Standards and shall be retroreflective thermoplastic.

Accessible paved areas shall be graded at 1.5% minimum to 4.5% maximum, with a 2% cross slope.

Stamped asphalt patterns shall be approved by the Director of Recreation, Parks and Cultural Activities and the Director of Transportation and Environmental Services.

Installation

Asphalt shall be installed by trained and certified crews.

Life Cycle Expectations

Pavement is anticipated to require replacement after 15-20 years of normal maintenance and ordinary use.



Vehicular use application

Intentionally Blank

CONCRETE | PEDESTRIAN

Purpose

Concrete paving materials shall be provided for non vehicular circulation where a rigid system is desired.

General Information

Concrete materials including Portland cement, admixtures, aggregates and reinforcement shall comply with ASTM C-150 standards for Type I concrete.

Materials and Finish

Design mixes shall be appropriate for project conditions, weather, site test results and materials.

Exterior concrete pavement shall be finished with a light broom finish perpendicular to travel direction unless otherwise specified.

Concrete shall be tested by contractor for compressive strength, slump and air content.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Reinforcement shall be included as determined by the design engineer for strength. Reinforcement shall be welded wire mesh or synthetic fiberglass material.

Concrete pavement may include integral color throughout the entire pavement section or decorative aggregate as determined by the Director of Recreation, Parks and Cultural Activities.

Score (contraction) joints at 5 feet interval maximum.

Installation

Concrete pavement shall be designed with expansion and troweled or saw-cut control joints.

Control joints on concrete curbs 6 inches wide or less shall be saw cut.

Forms and form release agents shall be appropriate to the concrete mix and finish, and shall not impair subsequent treatment of the concrete surfaces.

Accessible concrete pavement shall be designed with 1.5% minimum to 4.5% maximum slope, with a 2% cross slope.

The temperature of new concrete shall not be allowed to fall below 50 degrees Fahrenheit (10 degrees Celsius) during the curing period.

Life Cycle Expectations

Pavement is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.



Pedestrian use concrete

Intentionally Blank

CONCRETE | VEHICULAR

Purpose

Concrete paving materials shall be installed for vehicular circulation and staging where a rigid system is desired.

General Information

Concrete materials including Portland cement, admixtures, aggregates and reinforcement shall comply with ASTM C-150 standards for Type I concrete.

Materials and Finish

Concrete paving sections shall be designed by a geotechnical/professional engineer, licensed in the commonwealth of Virginia.

Design mixes shall be appropriate for project conditions, weather, site test results and materials.

Exterior concrete pavement shall be finished with a medium broom finish unless otherwise specified.

Concrete shall be tested for compressive strength, slump and air content.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Steel reinforcement shall be included as determined by the engineer for strength. Rebar and welded wire fabric shall meet current ASTM standards.

Concrete pavement may include integral color throughout the entire pavement section or decorative aggregate as determined by the Director of Recreation, Parks and Cultural Activities.

Installation

Striping shall meet the requirements of Manual on Uniform Traffic Control Devices (MUTCD) Standards and shall be retroreflective thermoplastic.

Concrete pavement shall be designed with expansion or saw-cut control joints per industry standards.

Forms and form release agents shall be appropriate to the concrete mix and finish and shall not impair subsequent treatment of the concrete surfaces.

Accessible concrete pavement shall be designed with 2% minimum to 4.5% maximum slope, with a 2% cross slope.

The temperature of new concrete shall not be allowed to fall below 50 degrees Fahrenheit (10 degrees Celsius) during the curing period.

Life Cycle Expectations

Pavement is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.



Vehicular use concrete

Intentionally Blank

COURT SURFACING | COLOR COAT

Purpose

Tennis, basketball and multi-purpose courts shall be finished with textured slip resistant surfacing.

General Information

Surfacing material and lining shall meet United States Tennis Association standards and National Federation of State High School Associations.

Related Standards: Court Diagram | Tennis, Court Diagram | Basketball, Court Diagram | Futsal, Court Diagram | Pickleball.

Materials and Finish

Courts shall be installed on a base course consisting of 4 inches minimum vertical depth VDOT 21b stone, compacted to 95% proctor density.

Surfacing shall be a hot mix asphalt with 9.5mm aggregate size.

Surfacing shall be full depth asphalt with 3 inches minimum vertical depth.

Paving strips shall be 10 feet minimum horizontal width.

Primers or resurfacers shall be used to fill and seal the asphalt. Air pockets, holes, cracks, seams, depressions and other blemishes are not acceptable.

Color coating shall consist of a mix of 100% acrylic resins, water, sand and Portland cement.

Color coating shall be a minimum of two coats.

Lines shall have solid, consistent, sharp edges and corners.

Features

The standard colors are US Green and Dark Green, unless approved by the Director of Recreation, Parks and Cultural Activities.

Installation

Court surfacing shall be installed by trained and certified crews. Color coating shall be performed by professionals with 5 years minimum experience installing color coating.

Courts shall be installed to drain end-to-end at a 1% slope.

Surfacing shall not pond or hold water.

Life Cycle Expectations

Color coating is anticipated to require re-application after 8 years of normal and ordinary use.



Ball court color coating

Intentionally Blank

COURT SURFACING | LINING

Purpose

Tennis, basketball and multi-purpose courts shall be lined with textured slip resistant paint.

General Information

Lining material shall meet United States Tennis Association standards and National Federation of State High School Associations.

Related Standards: Court Diagram | Tennis, Court Diagram | Basketball Court Diagram | Futsal, Court Diagram | Pickleball.

Materials and Finish

Primers or resurfacers shall be used to fill and seal the asphalt. Air pockets, holes, cracks, seams, depressions and other blemishes are not acceptable.

Lining paint shall be highly pigmented 100% acrylic paint with a minimum of two coats.

Lines shall have solid, consistent, sharp edges and corners.

Features

Lining color shall be white for tennis and basketball courts, light blue shall be used for pickleball courts, and yellow shall be used for futsal courts. Other colors shall be approved by the Director of Recreation, Parks and Cultural Activities.

Tennis courts shall be lined for both singles play, doubles play, and Pickle-ball play.

Installation

Court lining shall be lined out with tape then hand brushed by trained and certified crews.

Lining shall be performed by professionals with 5 years minimum experience lining installation.

Life Cycle Expectations

Lining is anticipated to require re-application after 5 years of normal and ordinary use.



Ball court Lining

Intentionally Blank

EDGING

Purpose

Edging shall be provided where separation of dissimilar materials is desired.

General Information

Approved edging materials can include concrete, metal, or wood.

Related Standards: Aggregates, Asphalt | Pedestrian, Fence | Mow Strip.

Materials and Finish

Concrete shall be finished with a light broom finish.

Metal edging shall be minimum $\frac{1}{8}$ inch thick steel, unfinished or painted black. Edging planks shall be 10 foot long by 5 inches minimum tall with 12 inch steel stakes.

Wood Edging shall be 6 inch by 6 inch (nominal sizes) square lengths. Pressure-treated lumber shall not be treated with Chromated Copper Arsenate (CCA). Pressure-treated lumber shall be Alkaline Copper Quaternary (ACQ) or Copper Borate Azole (CA) type. When Alkaline Copper Quaternary (ACQ) lumber is used, fasteners shall be galvanized or stainless steel.

Features

Concrete pavement may include integral color throughout the entire pavement section or decorative aggregate as determined by the Director of Recreation, Parks and Cultural Activities.

Installation

Concrete shall be designed with expansion and saw-cut control joints. Forms and form release agents shall be appropriate to the concrete mix and finish, and shall not impair subsequent treatment of the concrete surfaces. The temperature of new concrete shall not be allowed to fall below 50 degrees Fahrenheit (10 degrees Celsius) during the curing period.

Metal edging shall be 3 inch minimum below grade, and installed per manufacturer's recommendations. Stakes shall be spaced a maximum of 36 inches apart.

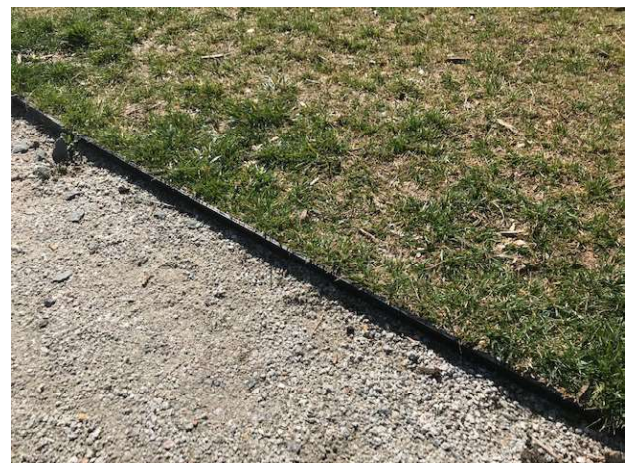
Wood Edging shall be installed flush with grade to 1 inch above grade and staked at 24 inch intervals with #4 half inch diameter by 24 inches long coated rebar.

Life Cycle Expectations

Concrete is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.

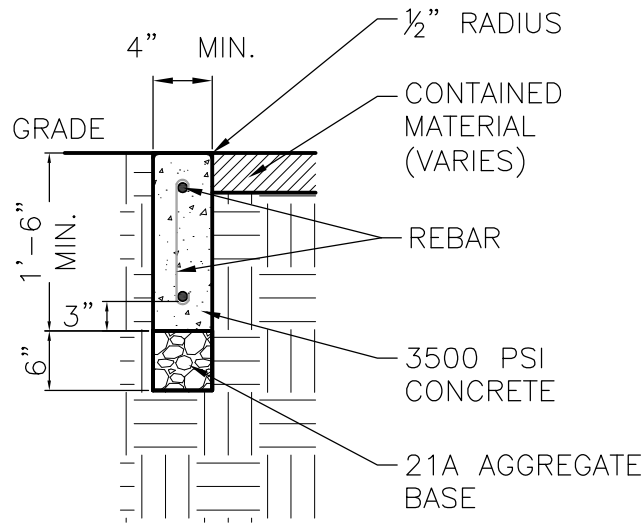
Metal edging is anticipated to require replacement after 20 years of normal and ordinary use with regular maintenance.

Wood edging is anticipated to require replacement after 15 years of normal and ordinary wear.



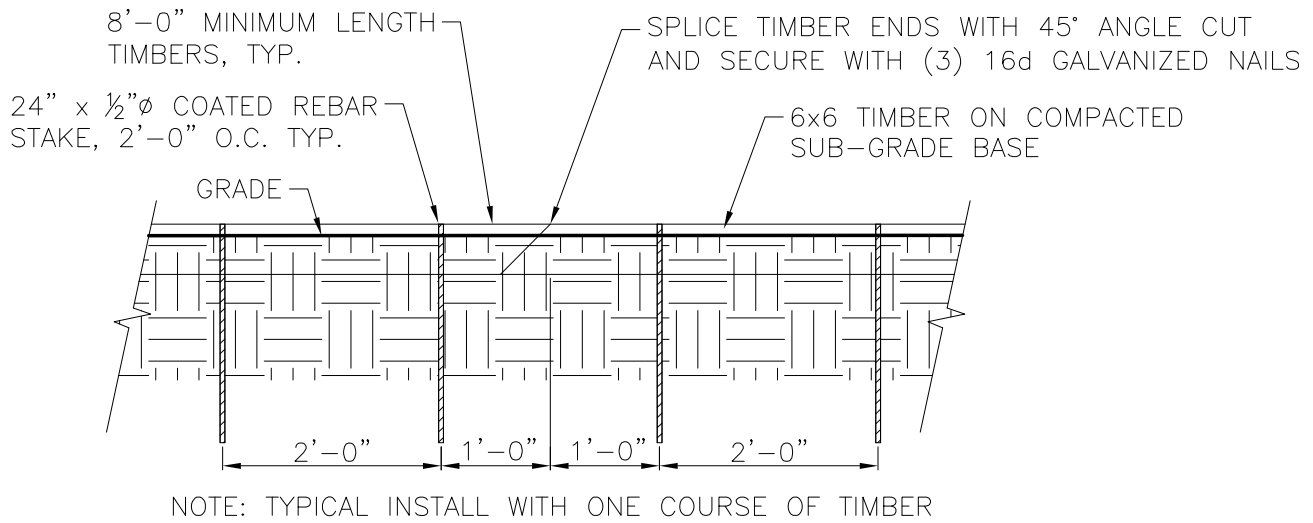
Metal Edging

EDGING



Concrete edging

Not to scale



Wood edging

Not to scale

INFIELD MIX

04

Purpose

Infield mix shall be provided for safe athletic play at diamond ball fields.

General Information

Mix shall be tested according to current ASTM standards including particle size, standard proctor and sieve analysis.

Mix shall comply with the National Federation of State High Schools or other governing authority.

Soil stabilizers or other additives shall be approved by the Director of Recreation, Parks and Cultural Activities.

Mix shall be free of organic matter.

Related Standards: Field Diagrams | Baseball, Field Diagrams | Softball, Fence| Backstop, Fence | Chain Link.

Materials and Finish

The soil classification range shall be: Sand (2.0-0.05mm) 65-70%, Silt (0.05-0.002mm) 15-20%, and Clay (less than 0.002) 10-15%.

USDA soil classification shall be Sandy Loam.

Moisture Rate shall be between 14-17%.

Mix shall be installed at least 4 inches in depth.

Color shall be Red/Brown.

Features

Mix may include a calcified clay conditioner. Preferred: one metric or unit ton of calcified clay conditioner per 20-25 tons of infield mix.

Installation

Prior to installation, existing subgrade shall be consistent in grade and free of weeds, trash and other debris.

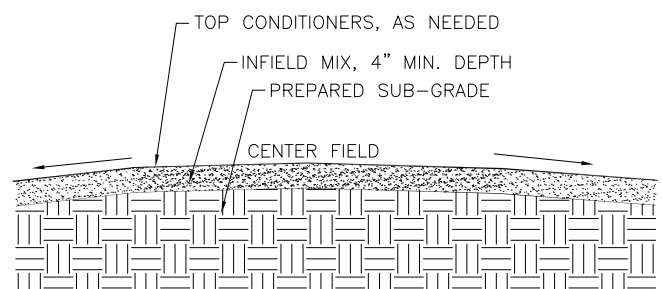
Infield shall be crowned from the middle equally on all sides.

Life Cycle Expectations

Infield mix is anticipated to require replacement annually based on normal and ordinary use.



Infield mix



Cross section

Not to scale

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PERMEABLE SURFACING | UNIT PAVERS

Purpose

Pervious paving materials shall be installed for exterior circulation trails where storm runoff reduction and water infiltration are desired or when located in a Resource Protection Area.

General Information

Unit paver patterns and colors shall be approved by the Director of Recreation, Parks and Cultural Activities.

Unit paver systems shall meet current ASTM standards.

When used as a Best Management Practice (BMP) to receive water quality credit under the Virginia Stormwater Management Program (VSMP), surfacing systems shall comply with the Virginia Department of Environmental Quality's Stormwater Management Program.

Materials and Finish

Unit pavers include brick, asphalt, concrete and stone pavers that have ridges, joint openings, or other systems of providing space between unit pavers.

Other unit paver materials shall be approved by the Director of Recreation, Parks and Cultural Activities.

Unit pavers for use in exterior areas shall include a slip resistant finish.

Installation

Do not compact subgrade.

Slope shall be limited to 5%.

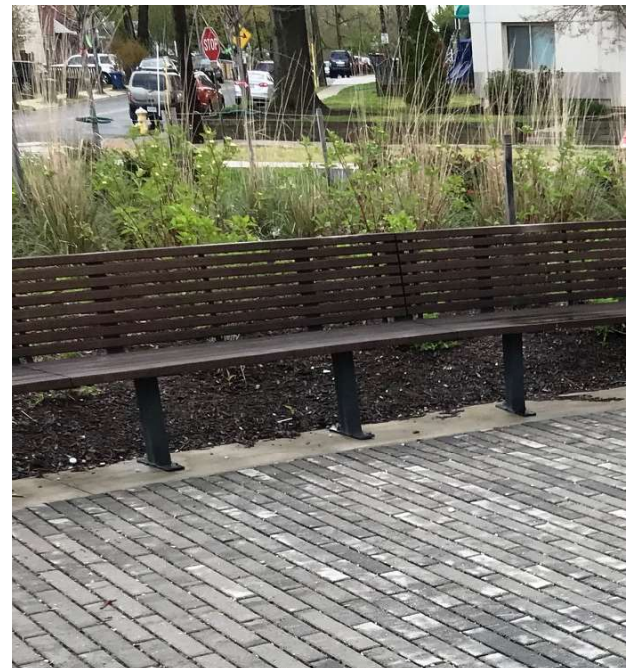
Unit pavers shall have an approved containment edging, except next to curbing or foundations.

Installation must comply with the Virginia Stormwater Management Program (VSMP).

Life Cycle Expectations

A 5 year minimum warranty is required.

Pavers are anticipated to be replaced after 30 years based on normal and ordinary use.



Pervious Pavers

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PERVIOUS SURFACING | ASPHALT

Purpose

Pervious asphalt paving materials shall be installed for exterior circulation trails where storm runoff reduction and water infiltration are desired.

General Information

Materials shall meet current ASTM standards for asphalt cement and aggregates.

When used as a Best Management Practice (BMP) to receive water quality credit under the Virginia Stormwater Management Program (VSMP), surfacing systems shall comply with the Virginia Department of Environmental Quality's Stormwater Management Program.

Materials and Finish

Asphalt surface shall be open-graded with smooth, continuous and free of pulls, tears and deflections.

Paving strips shall be 10 feet horizontal dimension minimum or full width of the travelway.

Paving shall be flush to adjacent grade.

Design mixes shall be appropriate for project conditions, weather, test results and materials.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Accessible paved areas shall be graded at 1.5% minimum to 4.5% maximum, with a 2% cross slope.

Installation

Asphalt shall be installed by trained and certified crews.

Do not compact subgrade.

Pervious asphalt shall be 2 inch minimum depth over 4 inch minimum depth 21A aggregate sub base reservoir over woven geo-textile fabric.

Slope shall be limited to 5%.

Life Cycle Expectations

Asphalt pavement is anticipated to require replacement after 15-20 years of normal maintenance and ordinary use.



Pervious Asphalt

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PERVIOUS SURFACING | CONCRETE

Purpose

Pervious concrete paving materials shall be installed for exterior circulation trails where storm runoff reduction and water infiltration are desired.

General Information

Materials shall meet current ASTM standards for concrete cement and aggregates.

When used as a Best Management Practice (BMP) to receive water quality credit under the Virginia Stormwater Management Program (VSMP), surfacing systems shall comply with the Virginia Department of Environmental Quality's Stormwater Management Program.

Materials and Finish

Design mixes shall be appropriate for project conditions, weather, site test results and materials.

Mix shall have interconnected voids between 15% and 25% in the hardened concrete.

Concrete shall be tested by contractor for compressive strength, slump and air content.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Features

Accessible paved areas shall be graded at 1.5% minimum to 4.5% maximum, with a 2% cross slope.

Reinforcement and contraction joints shall be as determined by the design engineer for strength.

Concrete pavement may include integral color throughout the entire pavement section as determined by the Director of Recreation, Parks and Cultural Activities.

Installation

Do not compact subgrade.

Slope shall not exceed to 5%.

Concrete pavement shall be designed with expansion and troweled or saw-cut control joints.

Control joints on concrete curbs 6 inches wide or less shall be saw cut.

Forms and form release agents shall be appropriate to the concrete mix and finish, and shall not impair subsequent treatment of the concrete surfaces.

Accessible concrete pavement shall be designed with 1.5% minimum to 4.5% maximum slope, with a 2% cross slope.

The temperature of new concrete shall not be allowed to fall below 50 degrees Fahrenheit (10 degrees Celsius) during the curing period.

Life Cycle Expectations

Pavement is anticipated to require replacement after 15-20 years of normal maintenance and ordinary use.



Pervious Concrete

Intentionally Blank

PERVIOUS SURFACING | FLEXIBLE PAVING

Purpose

Pervious pavement materials shall be installed for exterior circulation trails where storm runoff reduction and water infiltration are desired.

General Information

Paving patterns shall be approved by the Director of Recreation, Parks and Cultural Activities.

Pavement systems shall meet current ASTM standards.

Flexible paving shall not be used for BMPs.

Materials and Finish

Pavement shall consist of recycled rubber material, stone aggregates and urethane binding agent. Mix shall be 50% recycled tires and 50% stone aggregate.

Pavement colors shall be approved by the Director of Recreation, Parks and Cultural Activities.

Surface shall be smooth, continuous and free of pulls, tears and deflections.

Pavement shall be flush to adjacent grade.

Design mixes shall be appropriate for project conditions, weather, test results and materials.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Installation

Pavement shall be installed by trained and certified crews.

Slope shall be limited to 5%.

When edging materials are not used, chamfer the pavement edge to a 45 degree angle.

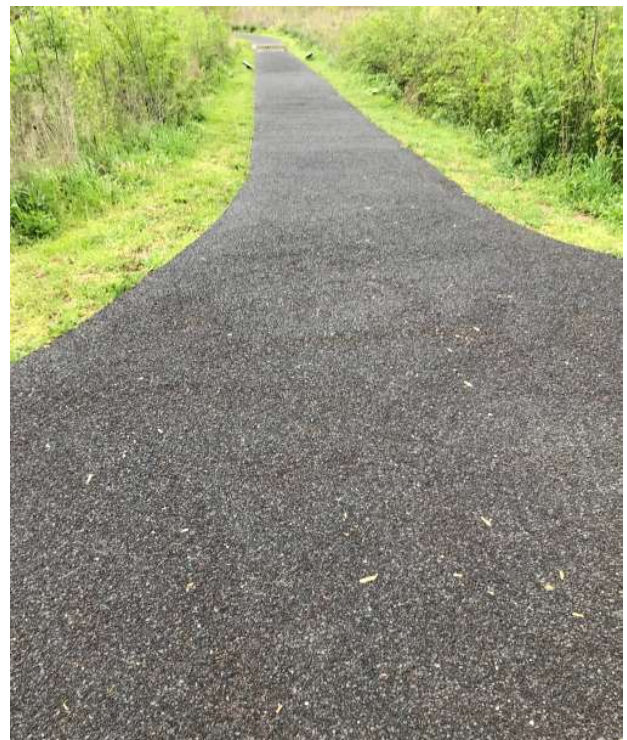
Paving shall have a minimum depth of 2 inches over 2 inches of #21A open graded base over 4 inches of #57 stone. Aggregates shall be installed on non-woven geotextile filter fabric (minimum 4oz.).

The curing temperature of new pavement shall not be allowed to fall below 45 degrees Fahrenheit (7.2 degrees Celsius) during the curing period.

Life Cycle Expectations

A 2 year minimum warranty is required.

Pavers are anticipated to be replaced after 30 years based on normal and ordinary use.



Pervious Pavement

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PLAY AREA | ENGINEERED WOOD FIBER

04

Purpose

Engineered wood fiber shall be used on a limited basis with approval by the Director of Recreation, Parks and Cultural Activities. This material shall be used in outdoor playgrounds, park areas, and construction sites where an impact absorbing surface is desired.

General Information

Safety surfacing shall meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Surfaces shall be International Playground Equipment Manufacturers Association certified or equivalent.

Surfacing shall be ADA compliant.

Safety surfacing shall be installed with a subsurface drainage system.

Construction site protection applications shall be a minimum depth of 8 inches.

Materials and Finish

Wood fiber pieces shall be comprised of Virginia softwood or hardwoods that do not exceed 1½ inches in length.

Material shall be non-toxic. Chemicals, additives, recycled wood products, wood pallets or waste wood are not permitted.

Material shall be free of soil, leaves, bark and twigs.

Installation

Prior to installation, existing subgrade shall be consistent in grade and free of weeds, trash, and other debris.

Install material according to depths specified by the manufacturer and CPSC guidelines.

Material shall be mechanically compacted.

After installation, surfacing shall be Gmax tested according to ASTM standards by a qualified third party.

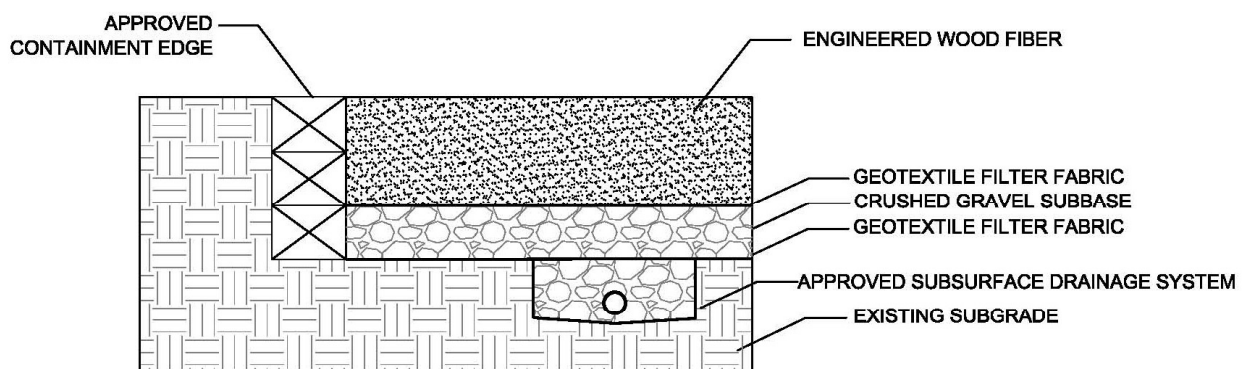
Life Cycle Expectations

A 15 year limited warranty is required.

Engineered wood fiber is anticipated to require replenishment annually based on normal and ordinary use.



Engineered wood fiber



Cross section

Not to scale

Intentionally Blank

PLAY AREA | POURED IN PLACE RUBBER

Purpose

Poured in place rubber shall be used in outdoor playgrounds and areas where an impact absorbing surface is desired.

General Information

Safety surfacing shall meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Surfaces shall be International Playground Equipment Manufacturers Association certified or equivalent.

Surfacing shall be ADA compliant.

Materials and Finish

Surface materials shall be manufactured from rubber materials. Binders shall be 'aliphatic' 100% polyurethane with UV stabilizers. Mixture shall be porous.

Safety surfacing shall have a containment border constructed from concrete, wood timbers, or other approved material. Containment borders shall be wide enough to protect surfacing from mowing and other maintenance equipment.

Compacted gravel is the preferred sub-base material. Concrete or asphalt shall be used for poor or unstable soils. Gravel shall be 6 inches minimum vertical depth.

Minimize use of black or dark colors and lighter colors are encouraged. Colors ratios should incorporate between 40%-60% black ethylene propylene diene monomer (EPDM).

Wear course shall be virgin EPDM and have a $\frac{5}{8}$ inch minimum vertical depth.

Base layer shall be stranded SBR and have a 3 inch minimum vertical depth or greater in compliance with CPSC and ASTM fall heights for adjacent equipment. SBR shall be bonded to the EPDM.

Curing period shall meet manufacturer's recommendations and/or industry standards.

Installation

Coordinate installation with play equipment.

Installation shall be a single monolithic pour.

Safety surfacing shall be installed with an adequate subsurface drainage system, designed by an engineer licensed to practice in the Commonwealth of Virginia.

Installation shall be performed by qualified professional with 5 years minimum experience installing poured in place rubber.

After installation, surfacing shall be Gmax tested according to ASTM standards by a qualified third party.

The curing temperature of new pavement shall not be allowed to fall below 40 degrees Fahrenheit (4.4 degrees Celsius) during the curing period.

Life Cycle Expectations

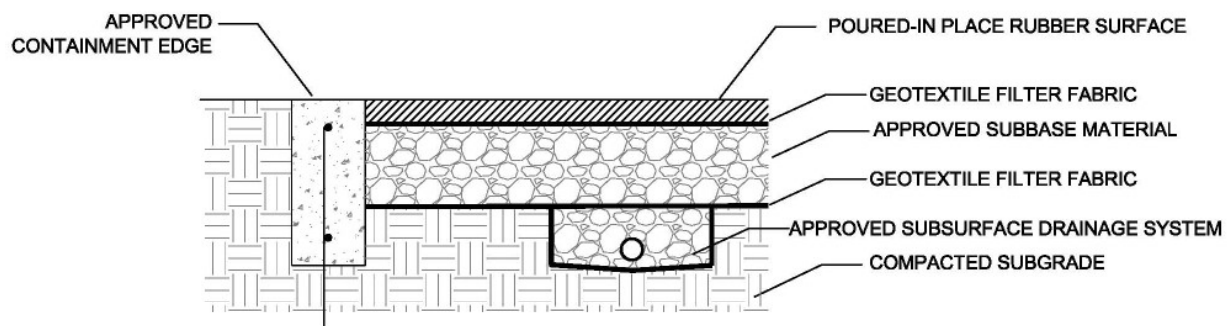
A 5 year limited warranty is required.

Poured in place rubber is anticipated to require replacement after 10 years based on normal and ordinary use.



Poured in place rubber surfacing

PLAY AREA | POURED IN PLACE RUBBER



Cross section

Not to scale

PLAY AREA | RUBBER TILE SYSTEM

Purpose

Rubber tiles shall be used for outdoor playgrounds and areas where an impact absorbing surface is needed.

General Information

Safety surfacing shall meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Surfaces shall be International Playground Equipment Manufacturers Association certified or equivalent.

Surfacing shall be ADA compliant.

Safety surfacing shall be installed with an adequate subsurface drainage system.

The standard interlocking tile system is “DuraSafe” manufactured by SofSurfaces, Inc., or City approved equal.

Materials and Finish

Tile thickness shall be 3 inches minimum, or greater in compliance with CPSC and ASTM standard.

Tile weight shall be 25.85 pounds minimum, based on tile dimensions of 2 feet by 2 feet.

Tiles shall have a containment border.

Tiles shall be installed on concrete or asphalt.

Minimize use of dark colors. Colors ratios should incorporate between 40%-60% black ethylene propylene diene monomer.

Installation

Follow manufacturer installation recommendations.

Installation shall be performed by qualified professional with 5 years minimum experience installing rubber safety tiles.

Install material according to manufacturer recommended depths and CPSC guidelines.

After installation, surfacing shall be Gmax tested according to ASTM standards by a qualified third party.

Life Cycle Expectations

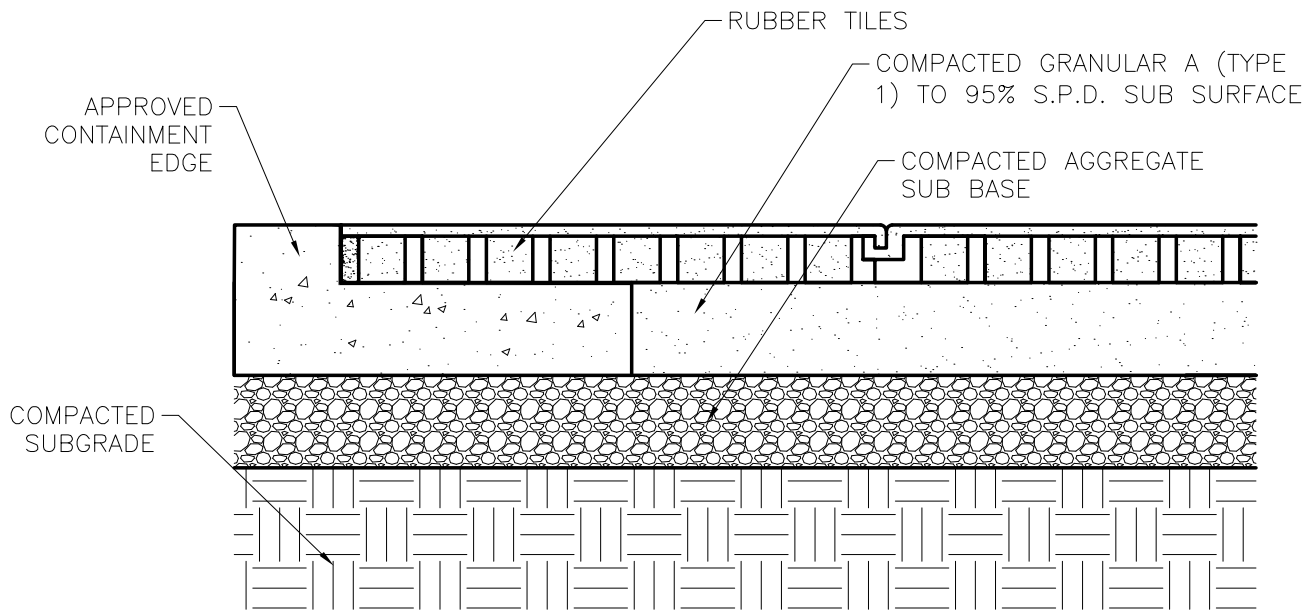
An 8 year minimum warranty is required.

Rubber tile systems are anticipated to require replacement after 15 years based on normal and ordinary use.



Rubber tile system

PLAY AREA | RUBBER TILE SYSTEM



Rubber Tile System

Not to scale

SAND MIXES | VOLLEYBALL

Purpose

Sand mixes shall be provided for safe athletic play at outdoor volleyball facilities.

General Information

Volleyball sand shall be contained with a wood border or other containment system approved by the Director of Recreation, Parks and Cultural Activities.

Sand shall meet USAV sand specifications.

A subsurface drainage system to meet site specific requirements shall be provided.

USDA soil classification analysis shall be provided.

Materials and Finish

Volleyball sand shall be high quality sand, fast draining, free of shells, rocks and other debris. Sand shall have low clay content.

Volleyball sand shall be 1 foot minimum continuous vertical depth.

Containment border shall be flush with grade.

Installation

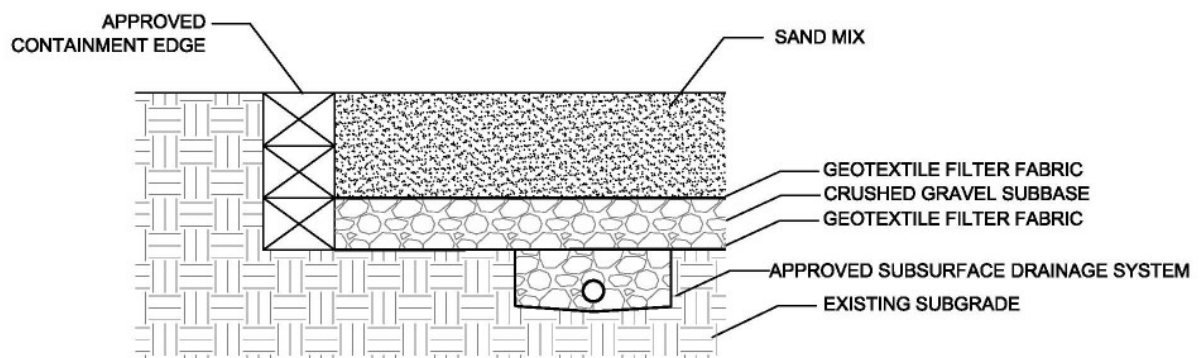
Prior to installation, existing subgrade shall be consistent in grade and free of weeds, trash and other debris.

Life Cycle Expectations

Sand is anticipated to require replacement annually based on normal and ordinary use.



Outdoor volleyball court



Cross section

Not to scale

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SPORTS FIELD | LINING

Purpose

Soccer fields, lacrosse fields, field hockey fields, and multi-use fields shall be lined for sports play. Fields can be natural turf or synthetic turf.

General Information

Lining material and dimensions shall conform to the current National Federation of State High School regulations.

Related Standards: Field Diagram | Soccer, Field Diagram | Lacrosse, and Field Diagram | Field Hockey.

Materials and Finish

Lining on natural turf shall be applied with flat finish natural grass paint. The standard lining paint is Pioneer Athletics Natural Grass Paint or approved equal.

Lining on artificial turf shall be applied with a flat finish artificial grass paint. The standard is Sherwin Williams Artificial Field Marking Paint or City equal.

Lines shall have solid, consistent, sharp edges and corners.

Features

Inlaid lining and tick marks on new synthetic turf installations shall be colored fiber to match the specified turf type.

The standard lining colors or tick marks for sports fields are as follows:

Soccer fields: white lining.

7V7 soccer: yellow lining.

Men's lacrosse: medium blue tick marks.

Women's lacrosse: red tick marks.

Field hockey: black tick marks.

Installation

Inlaid lining and tick marks shall be factory installed for new synthetic turf installation.

Lining on turf fields shall be applied by a paint machine or portable liner.

Life Cycle Expectations

Lining for synthetic turf is anticipated to require re-application every year of normal and ordinary use.

Lining for natural turf is anticipated to require reapplication weekly.



Sport Field Lining

Intentionally Blank

SYNTHETIC TURF | SPORTS FIELD

Purpose

Synthetic infill turf systems shall be provided where all weather athletic facilities are desired.

General Information

Synthetic infill turf systems shall comply with all current ASTM rules and regulations for play surfaces.

Materials and Finish

Synthetic infill turf shall be extruded monofilament polyethylene fiber, slit film, or hybrid.

Fiber pile weight shall be 40 - 42 ounces/square yard minimum. Pile height shall be 2¼ inches minimum vertical height and dependant upon program/sport needs.

Infill system shall consist of virgin ethylene propylene diene polymerisat (EPDM) crumb rubber granules. Infill systems shall be 100% rubber. Sand infill mixes shall be permitted. Recycled tire rubber infill mix is not permitted.

Rubber shall be green or black in color, clean, and particles shall be consistent in shape and size.

Features

Turf markings shall conform with the current National Federation of State High School regulations.

Adhesives used in bonding the system shall be resistant to moisture, bacteria and fungus.

Installation

Systems shall be installed by personnel certified in installation for the turf system selected.

Systems shall be installed over an engineered base of stone or stone plus impact board.

After installation, surfacing shall be Gmax tested according to ASTM standards by a qualified third party.

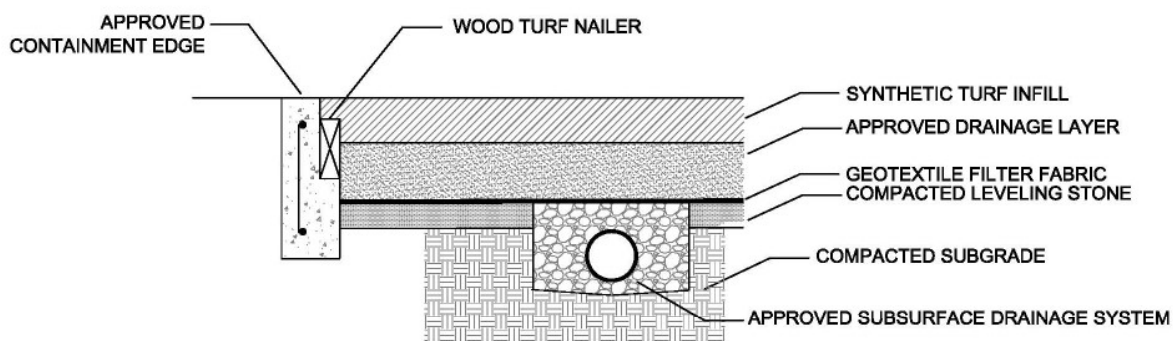
Life Cycle Expectations

An 8 year minimum warranty is required. The warranty shall cover all repairs to the turf through its duration.

Synthetic infill turf systems are anticipated to require carpet replacement after 8-10 years based on normal and ordinary use.



Synthetic infill turf athletic field



Synthetic infill turf section

Not to scale

Intentionally Blank

SYNTHETIC TURF | PLAYSPACE

Purpose

Synthetic infill turf systems shall be used in outdoor playgrounds and where impact absorption surface is are desired.

General Information

Synthetic infill turf systems shall comply with the most current ASTM and CPSC safety standard for public playground use.

Turf system shall be designed for public playground use.

Materials and Finish

Synthetic infill turf shall be polyethylene slit tape.

Tufted face weight shall be 50 ounces/square yard minimum, and pile height shall be 1½ inches minimum vertical height.

Infill system shall consist of clean silica sand with optional additives for temperature cooling.

Features

Adhesives used in bonding the system shall be resistant to moisture, bacteria and fungus.

Underlayment pads shall meet minimum impact attenuation requirements at fall zones for playground equipment.

Installation

Systems shall be installed by personnel certified in installation for the turf system selected.

Systems shall be installed over an engineered base of stone or stone plus impact board.

After installation, surfacing shall be Gmax tested according to ASTM standards by a qualified third party.

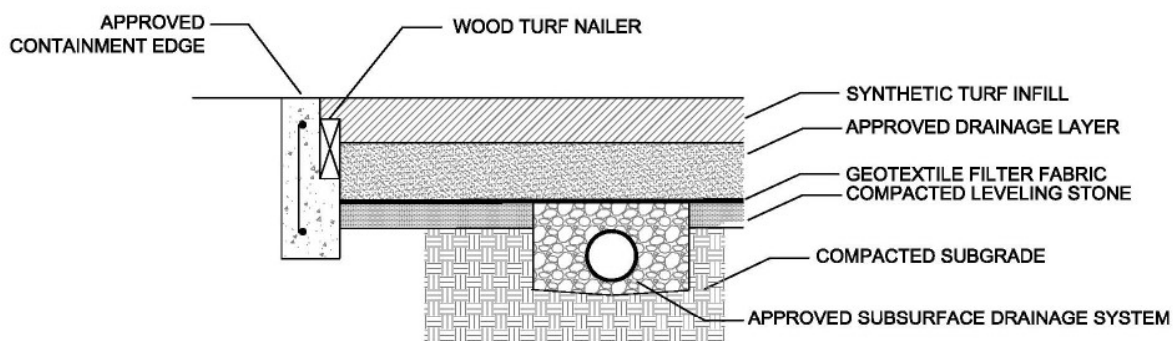
Life Cycle Expectations

An 8 year minimum warranty is required. The warranty shall cover all repairs to the turf through its duration.

Synthetic infill turf systems are anticipated to require carpet replacement after 8-10 years based on normal and ordinary use.



Synthetic turf



Synthetic infill turf section

Not to scale

Intentionally Blank

TRACK/WARNING TRACK

Purpose

Aggregates shall be used for track surfacing and in fields to provide a tactile transition from turf to the fence.

General Information

Aggregate shall be tested according to ASTM standards including particle size, standard proctor and sieve analysis.

Related Standards: Field Diagram | Baseball, Field Diagram | Softball.

Materials and Finish

Materials shall be washed processed aggregate.

Acceptable aggregates include washed gravel fines, such as stone dust and #10 stone.

Material shall be clean and free of organic materials.

Installation

Aggregates shall be installed on top of non-woven geotextile filter fabric over compacted subgrade.

Prior to installation, subgrade shall be consistent in grade and free of weeds, trash and other debris.

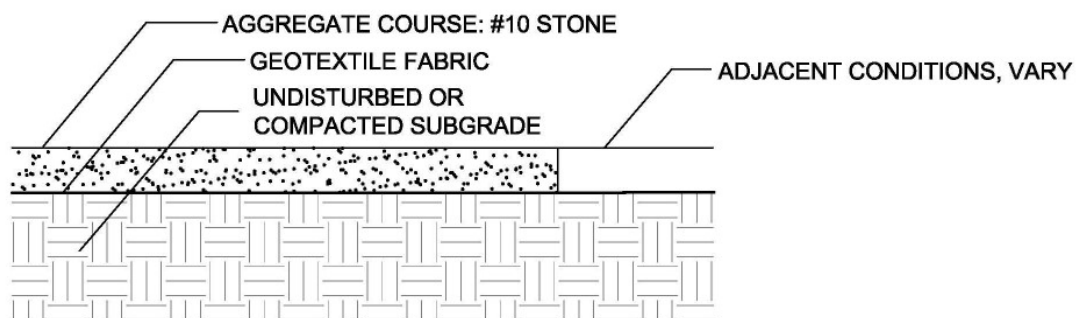
#10 stone shall be installed at 4 inches minimum vertical depth.

Life Cycle Expectations

Materials are anticipated to require annual replacement based on normal and ordinary use.



Warning track



Cross section

Not to scale

Intentionally Blank

TRAILS | NATURAL AREAS

Purpose

Trails shall be installed in natural parks and forested areas to provide connections to and through these parks and open spaces.

General Information

Bank run gravel material shall be used for trail surfacing in natural and forested areas.

Bank run gravel material shall be sourced locally with in the Northern Virginia region.

Materials and Finish

Bank run gravel is a natural deposit comprising of various gravel sizes and sand.

Large sized bank run gravel (3 inches or larger rock size) shall be used for areas with vehicular use.

Smaller sized bank run gravel (3 inches or smaller rock size) shall be used for areas with pedestrian use.

Material shall be clean and free of organic materials.

Installation

Bank run gravel material shall not be installed over filter fabric or have a containment edge or border.

Prior to installation, trail area shall be consistent in grade and free of weeds, trash and other debris.

Bank run gravel material shall be installed at 1-3 inches minimum vertical depth.

Life Cycle Expectations

Bank run gravel is anticipated to require replacement after 5-7 years based on normal and ordinary use.



Natural Area Trail

Intentionally Blank

UNIT PAVERS

Purpose

Unit pavers shall be designed and installed for pedestrian, bicycle and light vehicular traffic.

General Information

Unit pavers include brick, asphalt, concrete and stone pavers. Paver systems shall meet ASTM standards.

The standard brick paver shall be the Old Virginia #24 Brick or the #237 Cambridge by Redland Brick, or City approved equal.

Clay, concrete, stone and asphalt pavers shall be approved by the Director of Recreation, Parks and Cultural Activities.

Materials and Finish

Pavers for use in exterior areas shall include a slip resistant finish.

Paving patterns shall be approved by the Director of Recreation, Parks and Cultural Activities.

Installation

Unit pavers may be installed over flexible setting bed for pedestrian traffic. Flexible paving systems shall be installed with sand swept, hand tight joints.

Unit pavers shall be installed over asphalt or concrete base for pavement designed for vehicular traffic. Paving systems shall be installed with sand swept, hand tight joints.

Life Cycle Expectations

A 5 year minimum warranty is required.

Pavers are anticipated to be replaced after 40 years based on normal and ordinary use.



#237 Cambridge Modular Paver by Redland Brick

Intentionally Blank

WOOD CHIPS AND MULCHES

Purpose

Loose wood chips and mulch materials shall be used for trail/path surfacing, erosion control and weed suppression.

General Information

The standard materials is shredded pinebark 1 inch-2½ inch sized wood chips or equal approved by the Director of Recreation Parks and Cultural Activities.

Material shall have a containment edge or border when adjacent to manicured planted areas.

City supplied materials shall be acceptable based on the Standards requirements.

Materials and Finish

Wood shall be comprised of pine softwood or pine straw.

Material shall be non-toxic. Chemicals, additives, recycled wood products, wood pallets or waste wood materials are not permitted.

Material shall be free of weed seeds, soil, leaves, bark, twigs, plastic, glass, metal, rock, or paper.

Color enhanced mulch shall not be acceptable.

Installation

Mulch shall be applied over non-woven geotextile filter fabric.

Prior to installation, existing subgrade shall be consistent in grade and free of weeds, trash and other debris.

Install mulch at 3 inches minimum continuous vertical loose depth.

Life Cycle Expectations

Mulch is anticipated to require replenishment annually based on normal and ordinary wear.



Wood chips

Intentionally Blank

CHAPTER 5

PARK STRUCTURES

Bridges
Dugouts
Park Shelters
Park Storage | Buildings
Park Storage | Sheds
Press Boxes
Restrooms
Shade Structures

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BRIDGES

Purpose

Bridges shall facilitate safe access for pedestrian and/or vehicles across bodies of water, unstable ground conditions, elevation changes, or other obstructive site conditions. Bridge design shall be aesthetically congruent with its specific site and functionally suited to meet its intended use.

General Information

Bridges and abutments shall be designed per professional structural engineering standards of practice including integration of redundancy systems and factors of safety. Bridges and abutments shall be certified by a professional structural engineer licensed to practice in the commonwealth of Virginia.

Bridges traversing water courses or deep culverts subject to periodic flooding shall be designed to accommodate wet weather events and design to meet potentials associated hydraulic forces where applicable.

Bridges located within the 100-year FEMA/FIRM floodplain shall comply with design and/or performance requirements required for floodplains established by City's Department of Transportation and Environmental Services and other agencies having jurisdictional authority.

Geotechnical subsurface mechanical and hydro logology investigation and analysis report shall be provided by the design consultant and/or bridge fabricator and submitted to the City for review approvals prior to design. The soils analysis and report shall be prepared by a licensed, reputable soils laboratory, signed by a professional civil engineer, licensed in the commonwealth of Virginia.

Bridges shall be ADA compliant and compliant with City Building Codes, regulations, and ordinances. Handrails and/or railings shall be ADA compliant per City Building Code. Safety handrails placed on the interior structural truss or guardrails shall have ends sealed and ground smooth eliminating sharp edges. The safety rail system shall be designed for an infill loading of two hundred pounds (200 lbs.), applied horizontally at right angles, to a one (1) square foot area at any point in the system.

Bridges shall meet the static and dynamic design loads specified for each project. Loads include but are not limited to dead load, live load, concentrated load, vehicle load, wind load and snow load.

Bridges shall have 8 feet minimum clear horizontal width. For remote trails, 4 feet minimum clear width shall be provided for pedestrian only use.

Bridges located on designated multi-modal trail routes shall comply with the most current Alexandria Bicycle Transportation and Multi-Use Trail Master Plan, AASHTO and VDOT trail specifications.

City preferred standard bridge construction is prefabricated weathering steel truss structure bridge. Wood or timber structure and other types of bridge construction may be approved by the Director of Recreation, Parks and Cultural Activities.

Bridges shall be designed to accommodate lightweight construction equipment and vehicles and shall accommodate emergency vehicles where feasible.

BRIDGES

Materials and Finish

Structural members shall be marine grade weathering steel. To aid in providing a uniformly “weathered” appearance, all exposed surfaces of steel shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications.

Steel bridges shall be fabricated from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing and/or ASTM A588, or ASTM A242, ASTM A606 plate and structural steel shapes (FY = 50,000 psi). The minimum corrosion index of atmospheric corrosion resistant steel, as determined in accordance with ASTM G101, shall be 6.0.

Decking shall be concrete or composite resin or silicate-impregnated wood.

Wood deck materials shall be used on a limited basis. City preferred wood deck shall be No. 1 grade Yellow Pine or Coastal Douglas Fir with an Fc of 1200psi minimum. No arsenic shall be used in the pressure treating process.

For exposed metal (not weathering steel) paint shall be minimum three coats of exterior metal alkyd paint over two coats of iron oxide. Wood shall be painted with a clear coat protective sealant (following air drying). At Natural Areas, wood shall be unpainted, sealed with a City approved wood preserving sealant.

Paint finishes and coatings shall be approved by the Director of Recreation, Parks and Cultural Activities.

Bridge deck surface shall be of a material and/or finish which inhibits slipping.

Bridge surfaces shall be sloped to shed water.

Bridges shall be unfinished in natural areas. Hardware shall be stainless steel or galvanized.

Features

In remote, difficult to reach locations, bridges shall be assembled on-site.

Utility conduits shall be concealed within the bridge structure and hidden from view. Bridge lighting, when approved, shall be weatherproof LED type, UL rated and approved by City Codes (NEC). Conduit shall be flexible, impact resistant, watertight, and non-corrosive.

Bridge structures located within Natural Resource Areas, Resource Protection Areas, or areas designated archaeologically significant shall incorporate required compliance to ordinances and restrictive guidelines of the Department of Transportation and Environmental Services, Stormwater Management Division, and the Office of Historic Alexandria.

Installation

Bridge(s) shall be fabricated by a fabricator currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the category “Simple Steel Bridges” as set forth in the AISC Certification Program. Quality control shall be in accordance with procedures outlined for AISC certification.

Proposed bridge fabricator must have at least five (5) years’ experience designing and fabricating these types of structures, and a minimum of five (5) bridge projects of similar construction, each of which has been in service at least three years.

Bridge fabricator shall submit to City for approval five (5) copies of complete professional shop drawings showing and describing at minimum: geotechnical report, design calculations, all structural components, abutment construction, site specific construction staging or methodology, connections, hardware, anchors, fasteners, and any work necessary and incidental to Code compliant construction and installation.

Life Cycle Expectations

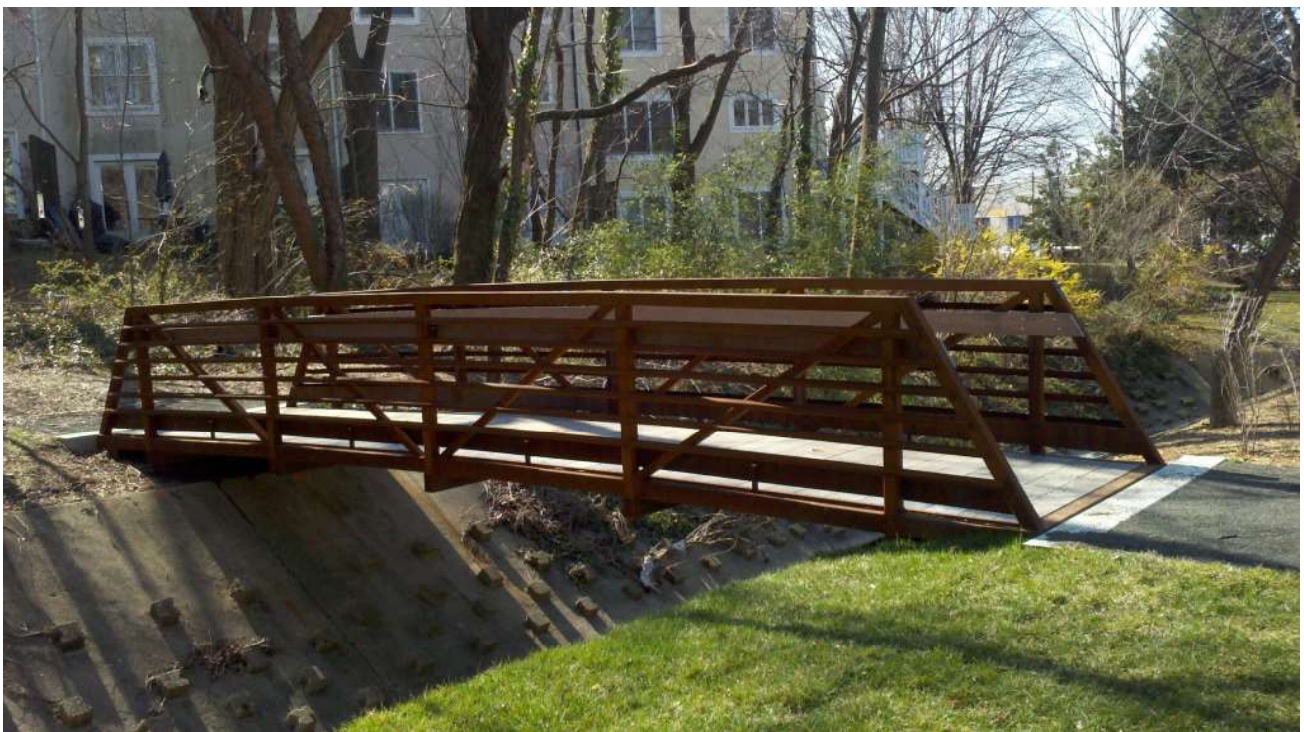
The bridge manufacturer shall warrant their steel truss structure(s) to be free of design, material, and workmanship defects for a period of fifteen (15) years from the date of delivery. Naturally, durable hardwood decking and wood attachments shall carry a fifteen (15) year warranty against rot, termite damage, or fungal decay. Other prefabricated bridge types shall be warranted for at least ten (10) years.

Bridges are anticipated to require replacement after 30 years based on normal and ordinary use.

BRIDGES



Composite resin bridge decking



Pre-fabricated steel truss bridge

DUGOUTS

Purpose

Dugouts shall be provided as team seating and temporary storage for team equipment during games at diamond ballfields.

General Information

Minimum head height at interior is 7 feet 6 inches from top of concrete slab. Dugout overall dimensions shall be 10 feet in width by 30 feet in length.

The dugout structure shall be a prefabricated steel assembly with a fixed aluminum canopy and prefabricated aluminum benches.

Dugouts shall be coordinated with perimeter fence work and shall have access gates to the field-of-play.

Dugouts shall be connected to a walkway or extended concrete deck for pedestrian access from outside the field area.

Dugout Fabricator shall provide professional quality shop drawings signed and sealed by fabricator's professional engineer licensed in the Commonwealth of Virginia. Shop drawings shall be complete: showing design calculations and all assembly components including concrete work. Permit approvals are required by the City.

Materials and Finish

Roofing shall be standing seam metal panels of minimum 24-gauge aluminum. Exterior roof shall be mill finished exposed aluminum with protective Kynar (or approved equal) coating. Interior ceiling surfaces shall have a wash-coat primer with white enamel finish coat. Metal roofing trim and drip edge shall be minimum 26-gauge and match the exterior finish of roof panels. Fasteners shall not be exposed at interior underside of roof. All fasteners shall be corrosive resistant.

Steel framing and metal components shall be fabricated, pretreated, and finished at manufacturer's facility. Steel shall be factory shot blasted and pretreated in a three-stage iron phosphate or equal wash. Epoxy primer coat shall be applied to all parts for corrosion protection. Powder coat shall be applied over epoxy primer. Exposed fasteners shall be powder coated to match structure. Framing color shall be dark green.

Slab shall be light broom finished perpendicular to travel direction or perpendicular to length for interior decks.

Installation

Dugout canopy framing structure shall be installed on steel reinforced poured-in-place concrete footings set below grade. Footings shall be certified by a professional engineer licensed in the commonwealth of Virginia. Concrete footings shall be formed separate, flush with concrete deck slab above, and isolated from deck via perimeter-gap expansion joint filled with exterior urethane joint material.

Dugouts shall have minimum 5-inch thick wire-mesh reinforced concrete deck-slab floor. Concrete floors shall have positive surface drainage directed away from field-of-play. Deck slabs shall have a minimum 8 inch by 12 inch steel bar-reinforced concrete integral thickened edge at perimeters.

Shop drawings shall include design calculations (including wind lateral and uplift forces), concrete-footing details, and all components, connectors, hardware, and fasteners shall comply with Virginia Building Codes and City Building Codes.

DUGOUTS

Installation (cont.)

Fabricator shall have a minimum ten years of experience in the shelter construction industry. Installers shall be approved and/or certified by the fabricator and shall have minimum five years (5) proven experience in assembly and installing of similar structures.

Dugout canopy structures shall be furnished with manufacturer's lightning protection compliant with Class I requirements (NFPA 780).

Dugout Seating may be provided by a separate fabricator but shall be installed with the dugout installation. Seating shall be mill finished anodized aluminum over anodized aluminum supporting posts anchored to the concrete deck slab below on surface mounted steel plates or embedded through deck to steel plate within insulated concrete footings below grade. Seating edges shall be ground smooth and free of sharp edges.

Life Cycle Expectations

A minimum ten (10-year warranty is required on steel frame members and paint finish systems. A minimum ten (10) year warranty is required on the metal roof.

Dugouts are anticipated to require replacement after minimum 30 years, based on normal and ordinary use.



Dugout structure

PARK SHELTERS

Purpose

Park shelters are self-supporting canopy structures providing shade and weather protection for park users and accommodating a variety of recreational activities.

General Information

Shelters shall be a prefabricated, weather resistive metal assembly. Shelters shall comply with site specific City zoning requirements.

Shelters shall be compliant with ADA code providing barrier free pedestrian walkways adjoined to automobile parking areas and accessible barbecue grilles.

Shelters shall be placed on flat, level, and on firm ground having a soil bearing capacity meeting manufacturer's engineering requirements or at least 2500 psf soil bearing capacity.

Shelters shall not be placed within ten feet of adjacent tree drip lines, projected to approximate maturity, and shelters shall avoid existing or potential invasive root systems. Shelters exceeding 200 square feet in area shall be furnished with an integral stormwater gutter systems and down-leaders for spill out on precast concrete pad or brick pavers. Shelters shall not be situated within fifty (50) feet from a protected waterway or riparian resource.

Materials and Finish

Shelter roofing shall be standing seam metal roof panels of minimum 24-gauge aluminum. Roof shall be factory mill finished exposed aluminum with protective Kynar (or City approved equal) coating. Ceiling surfaces shall have wash coat primer with a white enamel finish coat. Metal roofing trim and drip gauge shall match exterior finish of the roof panels and at minimum 26 gauge.

Shelter framing steel and components shall be pretreated and finished at manufacturer's facility. Steel shall be factory shot blasted and pretreated in a three-stage iron phosphate or equal wash. Epoxy primer coat shall be applied to all parts for corrosion protection. Powder coat shall be applied over epoxy

primer. Exposed fasteners shall be powder coated to match structure. Color of framing and columns shall be dark green.

Roof panel fasteners shall not be visible on the underside of the roof. Roof fasteners, jagged edges, or sharp corners shall not be exposed. All sharp edges shall be neatly crimped or ground smooth.

Slab shall be light broom finished perpendicular to lengthwise (longitudinally).

Features

Where feasible, shelters shall provide weatherproof electrical power receptacles and lighting fixtures. Electrical receptacle box shall have weatherproofed, hinged, lockable-vandal proof cover.

All receptacles and fixtures shall be UL Rated GFCI, and manufactured weatherproof exclusively for outdoor locations. Electrical wiring shall be placed in metal conduit permanently fastened to the shelter structure and painted with alkyd enamel paint over red oxide primer to match structural components finish.

Lighting fixtures shall be LED type and GFCI mounted to structural members, not attached directly to the exposed underside of metal roofing panels. Control for lighting fixtures shall be attached directly to column support-member or other approved location. Lighting switch shall be timer controlled for automatic shut off at 30 minute intervals.. Electrical systems shall be installed by a Virginia licensed Professional Electrician in compliance with City Electrical Code (NEC) and applicable codes. All electrical work requires City permit approvals.

PARK SHELTERS

Installation

Shelter canopy framing structure shall be installed over steel bar-reinforced poured-in-place concrete footings set below grade and finished below 30 inch frostline.

Shelters shall have a minimum 5 inch thick steel bar-reinforced concrete floor-deck. Floor-deck slab shall have positive surface drainage to perimeter areas graded down, away from slab surface. Shelter floor-deck shall have steel bar-reinforced integral-poured thickened edges at minimum 10 inch by 16 inch continuous at perimeter.

Five(5)copiesofsheltermanufacturer'sshopdrawings shall be provided to the City for permit approvals prior to commencing the work of installation. Shop drawings shall show design calculations (including design for minimum 110mph wind lateral and uplift forces), concrete-footing details, all components, connectors, hardware, and fasteners in compliance with the Commonwealth of Virginia Building Code.

Manufacturer shall have a minimum ten years of experience in the prefabricated shelter construction industry.

Shelters shall be furnished with manufacturer's lightning protection, compliant with Class I requirements (NFPA 780).

Shelters located within Natural Resource Protected Areas (RPA) or areas designated archaeologically significant shall incorporate required compliance to the ordinances and guidelines of City Transportation and Environmental Services, Stormwater Management Division and the Office of Historic Alexandria.

Shelters shall be located on positive sloping grade with all sides leading stormwater out and away from the deck-slab. If a siting requires installation upon a depressed grade area, the entire deck-slab shall be elevated over clean sand fill compacted at 95% Standard Proctor Density (SPD) maintaining a minimum drop-slope of 2%. Compaction shall be water dampened and rolled or tamped in layers of 2 inches.

Life Cycle Expectations

A minimum 10 year warranty is required on steel frame members and paint systems. A minimum 10 year warranty is required on the metal roof.

Park shelters are anticipated to require replacement after minimum 30 years, based on normal and ordinary use.



Shelter structure

PARK STORAGE | BUILDINGS

Purpose

Storage buildings shall be provided at locations as identified in the city Park Plans.

General Information

Minimum interior ceiling height is 8 feet from top of finished floor. Storage building minimum dimensions shall be 12 feet in width by 12 feet in length.

Storage buildings shall have one metal personnel door and one minimum 10 feet wide metal roll up door.

Storage structures shall be prefabricated, corrosive resistive treated, metal assembly.

A City Building permit shall be required subject to the City Zoning Ordinance and site-specific restrictions. Storage buildings may require a site plan process and approval or site plan minor amendment depending on existing site restrictions and zoning constraints.

Storage structures shall not be placed within ten feet of adjacent tree drip lines, projected to approximate maturity, and avoiding conflicts with existing or potential invasive root systems. Storage structures exceeding 200 square feet in area shall be furnished with stormwater gutter systems and down-leaders for spill out to precast concrete pad or brick pavers.

Shelters located within Natural Resource Protection Area (RPA) or areas designated archaeologically significant shall incorporate required compliance to the ordinances and guidelines Transportation and Environmental Services, Stormwater Management Division and the Office of Historic Alexandria.

Materials and Finish

Roofing shall be standing seam metal panels of minimum 24 gauge aluminum. Exterior roof shall be mill finished exposed aluminum with protective Kynar (or City approved equal) coating. Metal roofing trim and drip edge shall be minimum 26-gauge matching exterior finish of roof panels. Fasteners shall not be exposed at underside of roof. Sharp edges shall be neatly crimped or ground smooth.

Wall sheathing shall be standing seam metal panels of minimum 24-gauge aluminum or similar corrugated panels. Metal corner trim and door trim shall be minimum 26-gauge.

Exterior wall color shall be tan with dark green trim elements. Alternate color schemes shall be subject to approval by the City prior to procurement. . Exposed fasteners shall be powder coated to match structure. All hardware shall be corrosion resistant.

Storage structures shall be installed on a concrete 5 inch thick steel reinforced slab. Slab shall have a medium broom finished perpendicular to travel.

Storage structures housing or potentially housing equipment with combustible engines shall install a permanent, prominently display sign shall be installed within the interior of the storage structure reading: "Do not operate gasoline or diesel combustion engines inside this building when the rollup door is closed".

PARK STORAGE | BUILDINGS

Features

Storage buildings may include electrical power receptacles for equipment use and charging and/or overhead lighting fixtures. Remote storage structures shall utilize photovoltaic systems where electrical service is unavailable and where electrical receptacles and/or lighting is required. Electrical system shall be grounded with City's electrical code (NEC) and other applicable codes.

All receptacles and fixtures shall be UL Rated GFCI weatherproof and manufactured exclusively for outdoor locations. Electrical wiring shall be placed in metal conduit permanently fastened to the storage shelter structural framing members.

Lighting fixtures shall be LED type mounted to structural members not attached directly to the exposed underside of metal roofing panels. Control for lighting fixtures shall be attached directly to column support member or other approved location. Lights can also be motion activated.

Door accesses shall be combination lockable-secured entry (or City approved keying system). Access into the storage unit shall be resistant to unauthorized entry.



Storage Building

Installation

Slab-deck floor shall be wire mesh reinforced poured-in-place concrete slab at minimum 5 inch thickness. Concrete footings shall be designed and constructed per manufacturer engineered requires given site specifics such as geotechnical findings. Surface finish shall be light broom swept perpendicular to longest side. A poured-in-place concrete ramp at rollup door locations shall be installed as part of the installation and assembly. An exterior door poured-in-place 5 inch thick concrete pad shall be installed at exterior of personnel door. Poured concrete shall typically be minimum 2500 PSF set over polyethylene vapor barrier. Screened vent shall be incorporated at the wall base in compliance with the City Building Codes.

Shop drawings shall describe and show design calculations, concrete-footing details, and all components, connectors, hardware, and fasteners in compliance with the Virginia Building Code. Five (5) copies of professional shop drawings shall be submitted to the City for permit approvals. Additional information may be required by City for compliance.

Manufacturer shall have minimum 10 years of experience in the prefabricated storage building construction industry. Installers shall be certified by the manufacturer or where not certification is not required, the installer shall provide relevant and sufficient proof (minimum of three structures within past the five years) of experience in assembly and installation of similar structures.

Storage Buildings shall be furnished with manufacturer's lightning protection, compliant with Class I requirements (NFPA 780).

Life Cycle Expectations

A minimum 10 year limited warranty is required on steel frame members and paint systems. A minimum 10 year limited pass-through warranty is required on the metal roof.

Storage buildings are anticipated to require replacement after minimum 30 years based on normal and ordinary use.

PARK STORAGE | SHEDS

Purpose

Storage sheds shall be provided where seasonal park storage or sport user group storage is needed to support programs and other City supported park functions such as park maintenance or housing of irrigation pumps and control systems.

General Information

Preferred storage shed type is non-corrosive metal construction providing durability and enhanced security. Minimum interior head height is 7 feet 6 inches from top of finished floor. Storage shed minimum dimensions shall be 10 feet in width by 12 feet in length.

Access shall be provided by a double out-swing door minimum size 6 feet total width (two panels at 3 feet each) and by 7 feet in height.

Storage structures shall be prefabricated steel component-assembly, shipped or delivered to the site unassembled or pre-assembled, ready for complete installation meeting manufacturers guidelines and requirements, complying with any City Zoning restrictions.

A building permit is not required for a shed less than 250 square feet. Sheds larger than 100 square feet are subject to the City Zoning Ordinance. Sheds may require a site plan or site plan minor amendment; however, all sheds structures shall be securely anchored to the ground below, able to withstand minimum 110mph lateral and uplift wind forces (per VA and City Codes). This may require steel rods anchored into grade or metal strap-anchoring to concrete footings below. Manufacture's product data shall confirm required compliant anchoring or a professional engineer shall provide design calculations and drawings showing compliances per applicable codes.

Materials and Finish

Roofing shall be standing seam metal panels or corrugated sheets of minimum 24-gauge aluminum. Exterior roof shall be mill finished exposed aluminum with protective Kynar (or City approved equal) coating. Metal roofing trim and drip edge shall be minimum 26 gauge and match the exterior finish of roof panels. Fasteners shall not be exposed at underside of roof.

Wall sheathing shall be standing seam or corrugated sheet metal panels of minimum 24-gauge aluminum or City approved non-corrosive panel material such as PVC or polyvinyl composite materials. Metal corner trim and door trim shall be minimum 26-gauge or City approved thickness of PVC type paneling.

Exterior wall color shall be tan with dark green trim elements. Alternate color schemes shall be subject to approval by the City prior to product procurement. Exposed fasteners shall be powder coated to match structure or otherwise visibly matching exterior panels' finish.

Access door shall be prefabricated hollow metal white or neutral color to match exterior wall panels. Composite material doors for use with composite material sheds shall be approved on a case by case basis.

PARK STORAGE | SHEDS

Features

Interior of sheds may be divided into storage lockers for sports equipment. Lockers shall be minimum size of 4 feet wide by 5 feet in length and securable with combination or pad lock.

Sheds may include electrical power receptacles and/or overhead lighting fixtures; however, electrical work will require an approved City trade permit prior to work.

All receptacles and fixtures shall be UL Rated GFIC, vapor proof, and manufactured exclusively for outdoor locations. Electrical wiring shall be placed in metal conduit permanently fastened to the shelter structure and painted with alkylid enamel paint over red oxide primer to match shed finish.

Lighting fixtures shall be low wattage LED type mounted to structural members not attached directly to the exposed underside of metal roofing or wall panels. Control for lighting fixtures shall be attached directly to column support member or other approved location. Lighting switch shall be accessible only from interior. Electrical receptacle box shall have weatherproof, lockable hinged covers on interior only. Electrical system shall be grounded in compliance with City's Electrical Code (NEC) and other applicable codes.

Shop drawings showing substantial structural attributes (see wind loading above) shall be required for all sheds intending to utilize an electrical power source. Professional shop drawings shall be reviewed by City prior to procurement.

Installation

Deck-slab shall be 4 inch steel reinforced concrete with light broom finish perpendicular to entrance and extended 1 foot beyond building wall or shall be clean ¾ inch pea gravel infill (or City approved equal) over 8oz. (perforations) non-woven, non-organic filter fabric. In a depth of minimum 6 inches – well compacted. Deck-slabs finished above grade shall accommodate a poured-in-place concrete ramp or site-built pressure treated wood lumber ramp. Wood ramp shall be anchored into grade below and connected with stainless steel screws.

Manufacturer shall provide a minimum 10 years of concurrent experience in the prefabricated shed construction industry, able to provide all necessary supporting documents and warranties upon request prior to procurement.

Sheds shall be furnished with manufacturer's lightning protection, compliant with Class I requirements (NFPA 780).

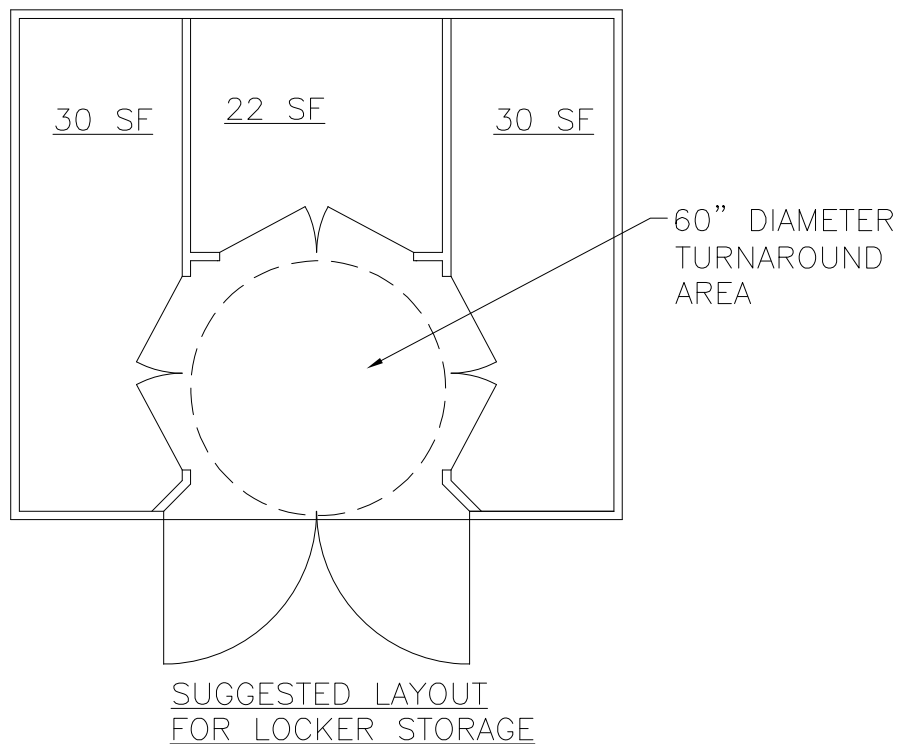
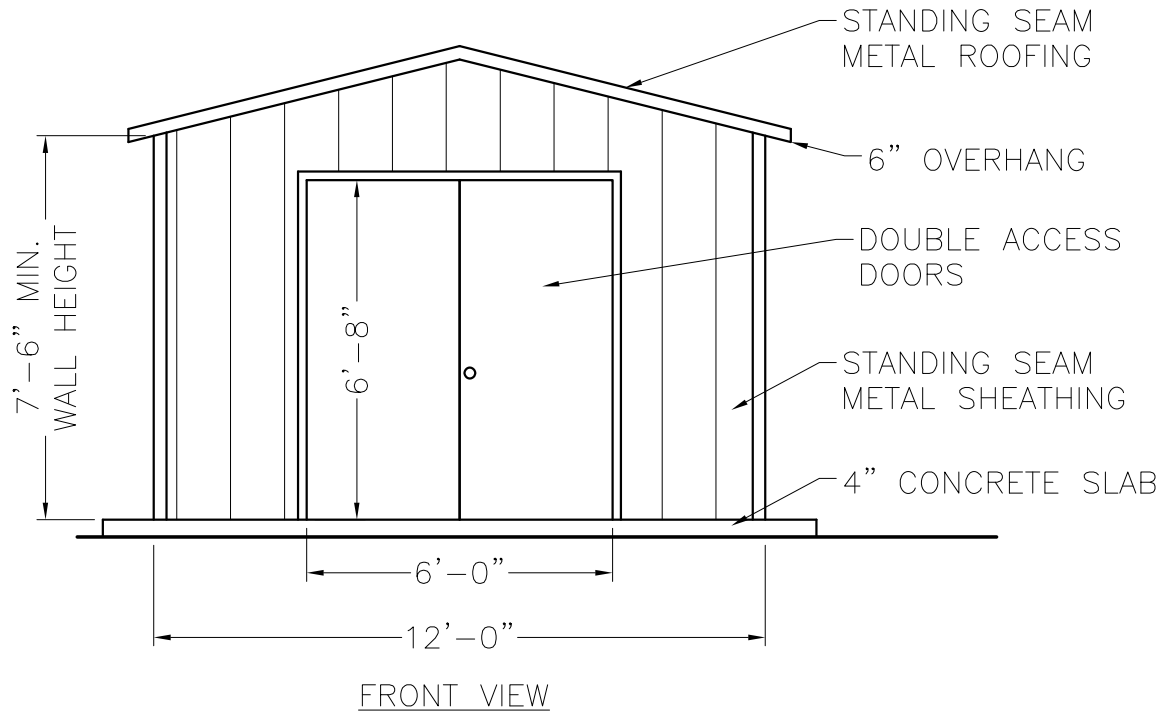
Life Cycle Expectations

A minimum 10 year limited warranty is required on steel frame members and paint systems. A minimum ten year limited pass-through warranty is required on the metal roof.

Sheds are anticipated to require replacement after minimum 20 years based on normal and ordinary use varying per specific type, quality of product, and selected method of shed foundation (pervious or impervious).

PARK STORAGE | SHEDS

05



Intentionally Blank

PRESS BOXES

Purpose

A press box provides a designated area for scorekeeper and/or the press at recreation fields.

General Information

The press box is an elevated platform with rigid metal-frame, cantilevered supported canopy above. Each press box shall have a manufactured prefabricated metal scorer's table anchored to the press box platform.

The press box shall be 6 feet 6 inches in width by 8 feet in length and be elevated to 2 feet 10 inches above ground plane. Head height at interior shall be minimum 7 feet 6 inches. Access steps shall be placed at one side of press box. Variables in dimensions may be approved by the City specific to site or functional requirements.

Materials and Finish

Press box framing steel and components shall be factory shot blasted and pretreated in a three-stage iron phosphate or equal wash. Epoxy primer coat shall be applied to all parts for corrosion protection. Powder coat shall be applied over epoxy primer. Exposed fasteners shall be powder coated to match structure. Color of framing and floor grating shall be dark green and approved by the City. Stainless steel woven wire guardrail panels shall be factory finished and unpainted.

Roof shall be designed to shed stormwater towards the rear of the pressbox (opposite to field side). Press box roofing shall be standing seam metal roof panels with minimum 24-gauge panel thickness. Exterior roof finish shall be mill finished aluminum with protective Kynar (or City approved equal) coating. Interior ceiling-panel surfaces shall have wash coat primer with white enamel paint finish. Metal roofing trim shall match finish of the roof panels at minimum 26 gauge. Roof panel fasteners shall not be visible on the underside of the roof. Exposed fasteners, jagged edges, or sharp corners shall not be exposed.

Platform framing and steps shall be fabricated with similar finished steel components. Open floor and tread area shall be galvanized bar grate panels with 1 inch by 1 inch maximum clear openings. Grate floor surfaces and step treads shall be slip resistant (with serrated top-edges). Galvanized handrails shall be provided at both sides of steps meeting Building Code requirements. Guardrail infill panels, provided at platform perimeter, shall be minimum 10 gauge, 2 inch by 2 inch, prefabricated stainless steel woven wire panels.

Features

The press box may include electrical power receptacles and/or overhead lighting fixtures; however, electrical power and lighting are mandatory at illuminated ballfields. Five (5) copies of shop drawings shall be provided by the manufacturer for permit approvals. Shop drawings shall meet all the City Building Codes and certified by a professional Virginia licensed structural engineer.

All receptacles and fixtures shall be GFIC, UL rated vapor proof, and manufactured exclusively for outdoor locations. Electrical receptacle box shall have weatherproofed, vandal resistant, lockable hinged cover. Electrical wiring shall be run in galvanized metal conduit secured to the pressbox structure and painted with alkyd enamel over red oxide primer to match shelter finish.

Light fixtures shall be LED type, UL approved and rated for exterior conditions. Fixtures shall be mounted on structural members. Lighting fixture control shall be attached directly to structural column support. Lighting shall be connected to field illumination system power with controls located within the press box.

Electrical system shall be grounded in compliance with City's electrical code (NEC) and other applicable codes.

PRESS BOXES

Installation

Press box structural steel column supports welded to structural steel base plates shall be anchored to below grade concrete pedestal footings. Baseplate assembly shall be concealed below concrete deck-slab pour. Continuous ½ inch expansion gaps solidly filled with urethane joint material shall be continuous around each column at depth of slab-deck.

Manufacturer shall provide five (5) copies of professional shop drawings signed and sealed by professional engineer licensed in the Commonwealth of Virginia. Shop drawings shall provide design calculations, concrete-footing details, and show all components, connectors, hardware, and fasteners required to assemble the shelter in compliance with Virginia and City Building Codes.

Press box canopy structures shall be furnished with manufacturer's lightning protection compliant with Class I requirements (NFPA 780).

Life Cycle Expectations

A minimum ten year limited warranty is required on steel frame members and paint systems. A minimum ten year limited pass-through warranty is required on the metal roof.

Press boxes are anticipated to require replacement after minimum 30 years based on normal and ordinary use.

RESTROOMS

Purpose

Park restrooms shall provide safe, accessible, convenient, and hygienic facilities to the public.

General Information

The park restroom fixture count shall be based on average use of all amenities and facilities at the park's approximated or peak attendance. The required Building Code minimum plumbing fixture count may be increased per site specific needs determined by City. Typical small to medium size park restrooms are stand-alone facilities with two to four flush stalls and one to two hand sinks at each gender.

Contractor shall provide construction drawings (CDs), specifications, and supporting documents such as geotechnical report to the City for permit approvals or City approved prefabricated/manufactured shall provide manufacturer's shop drawings. CDs shall comply with, Virginia Building Codes and City codes and regulations.

Materials and Finish

Exterior finish materials may include: Architectural finished concrete block, standard/modular clay brick, precast concrete siding, three-coat cement-stucco, natural stone veneer, or durable, relatively maintenance free materials approved by City.

Exterior surface finishes shall be constructed of materials naturally resistant to graffiti or include application of graffiti resistant coatings.

Roofing system shall be standing seam aluminum (non-painted) panels with protective exterior clear-coating (factory applied Kynar (or City approved resin based coating). Other materials are accepted on a project specific basis with City approval. Roof design shall incorporate gutters and downspout drainage composed of materials matching finish of roof panels. Roof gutter systems shall be designed for compatibility to overall building design. Gutter systems designs shall be based on calculations for percolation into to stormwater system. Roof shall incorporate snow and ice dam systems.

All interior paint finishes shall be epoxy latex based to accommodate hose washdowns. Gypsum board ceilings shall be minimum 5/8 inch thick mold and mildew resistant type. Provide a lockable vandal and rust resistant metal access panel through ceilings for maintenance access.

Toilet stall partitions, doors, and urinal screens shall be brushed stainless steel. Partition systems shall be overhead mounted, and wall braced with 12 inch clearance above finish floor. Door shall be swing-type with stainless steel continuous piano-type hinge. ADA stall's code compliant door shall be self-closing.

Lavatory countertops shall be solid pre-molded polymer or stainless steel premolded-prefabricated, multi-person trough-type units with integral backsplashes or City approved single lavatories. P-traps shall be insulated with resilient insulated wraps per ADA code, typical all units. Mirrors shall be polished stainless steel (frameless) with mechanical mounting (non-adhesive attachments).

Standard toilet stalls shall be minimum 36 inches wide and 60 inches deep, clear of door swing. doors shall be secured with stainless steel privacy latching devices such sliding deadbolts accessible from the inside only. Partitions between cubicles shall extend to at least six (6) feet above the floor level.

Standard floors surfaces include waterproof materials such as epoxy resin systems, ceramic tiles, veneer stone, homogeneous tiles, terrazzo or equally durable and slip resistant surfaces. Floor tiles shall be 6 inch x 6 inch x 1/2 inch thick minimum. Epoxy grout to color match tile or darker colors preferred. Floor finishes shall be resistant to heavy use, metal athletic cleats, graffiti, vandalism, and other detriments. City's preferred flooring material is monolithic epoxy resin with additive mineral particle aggregate. Standard wall surfaces shall be fully resilient materials such as epoxy resin systems, ceramic tiles, veneer stone, homogeneous tiles, stainless steel, enamel-coated steel panels, glass block, decorative metal panels, or fiber-polymer surfacing panels.

RESTROOMS

Features

New stand-alone restroom facilities shall qualify for minimum LEED certification in compliance with the USGBC's LEED certification process.

At least one diaper changing station shall be placed in each gender restroom. Additional units may be required by the City. A clothes hook shall be provided on the compartment side of the door at each toilet cubicle.

One soap dispenser shall be provided for the first sink and increased in number by minimum one for every two additional hand wash stations. Coordinate with City for approved toilet tissue roll dispensers and other proprietary, refillable accessories. One electric energy efficient hand dryer or paper towel dispenser shall be provided near the hand wash basin or sink area per each three hand wash stations.

Provide dual exterior, all-weather, stainless steel drinking fountains: one ADA compliant and one standard mounted with bottle or jug filler. Install unit near entrances at exterior of the building preferable in a dedicated niche at building exterior.

Park Restrooms shall have floor drains with ¼ inch diameter cold- water p-trap reseals. Drain hubs and grate covers shall be bronze or cast iron. Concrete floor slabs shall be sloped, maximum 2%, towards drains. Drains shall be installed for each maximum 400 square feet of floor area or major fraction thereof. Field and interior cleanouts shall be provided in compliance with Virginia Plumbing Code.

Park restrooms shall incorporate accessible fixtures and appliances for persons with disabilities per ADA Code. Provision shall comply to ADAAG in regard to quantities, plan layouts, and mounting heights. Compliance shall incorporate state and local code amendments.

Interior fixture space has natural lighting. For natural light, a minimum net glazed area of 8 percent of the floor area of the room served is recommended.

Artificial interior illumination shall provide average of 107 lux (10 foot-candles) over the area of the room at 30 inches above floor level. Fixtures shall be vandal resistant covered LED type. Interior lighting color temperature shall be between 3000 – 4000 Kelvin. Emergency illumination shall be LED type devices provided with self-charging battery backup systems. In all park restrooms lighting fixtures shall be vapor resistance (weather resistant). Lighting of the building's exterior shall be required on a project specific basis. Exterior lighting shall be exterior type LED wall packs.

Each facility shall have janitor's closet with integral concrete mop sink or stainless steel prefabricated floor basin. Janitor closet door shall be hollow metal with 24 inch by 24 inch aluminium louvred vent mounted in door 8 inch above bottom edge. Hot water shall be provided to the mop sink at year-round operating facilities provided by an energy efficient tankless electric water heater (sized per fixture count) installed within janitor's closet above the mop sink. Janitor's closet shall have at minimum four (4) total LF by 12 inch deep. stainless steel wire wall-mounted shelving, a stainless-steel wall mounted mop rack, and single LED lighting source. City may waive this requirement on a case by case basis.

Plumbing fixtures, components, materials, and appurtenances shall be high quality, new and unused, subject to submittal approval for samples and manufacturer's product data. For buildings not designated for operations during winter months, a blowout system for water line winterization shall be incorporated into the system. Each building shall have minimum two (2) cold water utility faucets with removable vandal-resistant handles. Toilet fixtures shall be porcelain, flush valve type utilizing a minimum ¾ inch connect. Urinal fixtures shall be porcelain with an automatic sensor flush valve utilizing a minimum 1 inch connect and shall be wall mounted. Urinal shall have an asymmetric backwall.

RESTROOMS

Features (Cont.)

A 2 foot -6 inch minimum interior-width plumbing service chase is required to separate gender restrooms (between plumbing fixture mounting walls) providing maintenance access. All exposed piping shall be well insulated and secured with sturdy commercial grade fasteners, hangers, and supports. Interior surfaces of the chase shall not have exposed sharp or abrasive surface protrusions, including fasteners.

Year-round operative facilities' plumbing systems shall be fully protected from winter freezing. Interior spaces of year-round facilities include active space-heating mechanical systems capable of maintaining a minimum indoor air temperature of 64°F at any interior point three feet above the floor on the design heating day and per design engineer's calculations.

Each restroom and the Janitor's closet shall have a mechanical exhaust system discharging air directly to the outdoors through wall or roof penetrations capped with a stainless steel exterior type vent cap at minimum ten (10) feet clear from building openings and not readily visible from entrance area view. Restroom Heating, Ventilation, and Air-Conditioning system shall be designed and approved by a professional engineer licensed in Virginia; all work shall meet the Virginia Building Code and City Building Codes.

Park restrooms shall be ventilated by natural or mechanical means. Natural ventilation shall be through louvered windows doors, and/or ridge, or other roof vents. The operating mechanism shall be vandal resistant and controllable only by City maintenance staff.

Mechanically ventilated air exchange rate shall be minimum of 15 air changes per hour or 75 cfm exhaust per toilet/urinal. Replacement air shall be taken directly from the exterior. Replacement air may be drawn through louvers in doors, walls, door undercuts, roof and wall vents, or other means.

Life Cycle Expectations

Park Restrooms shall anticipate 30-year life cycle based on normal and ordinary use. Thirty-year estimated life includes building structural and envelope systems, fenestration systems, electrical power and plumbing systems including plumbing fixtures (bodies). Interior finishes, mechanical system, lighting systems, faucets and flush-valves, and equipment (other than plumbing fixtures) are expected to exceed fifteen years under normal and ordinary use.

Installation

Park restroom structures shall be situated on a geologically stable substrate at minimum 2500 PSF or solid rock substrate. Soil composition, percolation rates, and soils bearing capacity shall be tested for compliance with engineered design by a professional geotechnical laboratory licensed to practice in Virginia.

Restroom doors shall be 18-gauge hollow steel flush panel doors set on heavy duty tamperproof stainless-steel hinges. A single floor pivot hinge is recommended on all entrance doors.

All doors shall have a mechanically fastened brushed stainless steel 10 inch by 32 inch kick plate at each side 3 inches above bottom edge. Door push panels shall be brushed stainless steel mechanically fastened. Locksets shall be digital pad per City approved product. All entrance doors shall be equipment with a brushed stainless-steel deadbolt with keyed entry from exterior side. A step pull may be provided at bottom of door.

All door hardware shall be brushed stainless-steel preapproved by City. Doors shall be primed with red oxide paint and finished with three coat of alkyd paint. Exterior door shall be equipped with an anodized aluminum drip flashing mechanically installed to door lintel above. Automatic closer shall be commercial rated brushed stainless-steel.

RESTROOMS



Park restroom

SHADE STRUCTURES

Purpose

Shade structures shall be installed in parks or playgrounds where shade is desired.

General Information

Shade structures shall comply with the most current ASTM safety standards and guidelines.

Related Standards: Playground Site Considerations

Materials and Finish

Support posts shall be 6 inch minimum schedule 40 steel pipe. Posts and frame shall have a double powder coated finish.

Shade fabric shall be UV stabilized high density polyethylene monofilament. Sewing thread shall be UV stabilized. Fabric shall have perimeter pocket for tensioning cable and reinforced corners. Fabric shall be mold and water resistant.

Shade fabric hardware shall be marine grade stainless steel or galvanized metal.

Features

Color schemes shall site specific and be subject to approval by the Director of Recreation, Parks and Cultural Activities.

Fabric shall be removable.

Installation

Equipment shall be installed according to the manufacturers' recommendations and industry safety specifications.

Frame and supports shall be permanently ground anchored or surface mounted.

Framing structure shall be installed on reinforced poured-in-place concrete footings set below grade. Top of footings shall not become exposed above the finish surface.

Shop drawings shall show design calculations, concrete-footing details, and all components, connectors, hardware, and fasteners in compliance with the Commonwealth of Virginia Building Code.

Life Cycle Expectations

A warranty of 10 years minimum is required.

Shade structures are anticipated to require replacement after 15-20 years based on normal and ordinary use.



Shade Structure

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CHAPTER 6

PLAYGROUNDS

Playground Site Considerations

Play Equipment

Play Equipment | Climbing Nets

Play Equipment | Nature Play

Play Equipment | Modular Structures

Play Equipment | Swings

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PLAYGROUND SITE CONSIDERATIONS

Purpose

Playground sites shall provide a safe, clean and comfortable environment for children and adults. Playgrounds generally serve children 2-12 years of age.

General Information

Playground sites shall be designed to comply with the most current CPSC and ASTM safety standards and guidelines.

Playground fencing to comply with ASTM F2049-11.

Site layout and landscape elements shall comply with the most current ADA/ADAAG standards and guidelines.

Water bodies (of any depth), pools, drainage systems, athletic fields, parking lots, streets with heavy traffic, and grill stations may conflict with playground uses. Fence or other approved physical separation barriers shall be provided.

Trees located within the playground area shall have an appropriate root zone barrier and shall be located outside of use-zone areas. Height clearances from play equipment shall be maintained as specified by CPSC and ASTM standards and guidelines.

Playground areas shall receive a moderate amount of seasonal shade throughout the day by trees or shade structures.

Play equipment shall be located and oriented to provide clear site lines from within the playground and surrounding areas.

Age-separated playground areas are recommended, however multi-age equipment within one playground area is acceptable provided that the playground has been designed and/or reviewed by a Certified Playground Safety Inspector (CPSI).

Each playground shall have a permanent park playground sign posted at the playground entrance or other high visibility location.

Playgrounds shall have appropriate safety surfacing.

Related Standards: Fences | Chain Link, Fences | Metal, Receptacle | Trash, Picnic Table | Standard, Picnic Table | ADA, Bench | Park, Signs, Play Equipment, Playground Safety Surfacing, Shade Structures.

Features

Equipment and amenities shall be located together, within one designated area.

Careful consideration shall be taken to maximize play value within the designated playground area.

The minimum size of a playground shall be 1,200 square feet. Playground minimum size is based on one tot swing set and one or two small play features, each intended for children 2-5 years in age.

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PLAY EQUIPMENT

Purpose

Playground equipment shall maximize play value and safety, while minimizing long-term maintenance.

General Information

Playground equipment shall be designed and manufactured to comply with the most current CPSC and ASTM safety standards and guidelines.

Components shall be International Playground Equipment Manufacturers Association certified or equivalent.

Playground equipment shall meet the most current ADA/ADAAG standards and guidelines.

Playground equipment shall be reviewed and approved by the Director of Recreation, Parks and Cultural Activities.

Play equipment shall have an approved safety surface.

Equipment shall reflect context and aesthetics. Equipment shall coordinate with other park and playground site furnishings.

Play equipment shall be designed for children 2-12 years of age. Typical age ranges include pre-school (2-5), school (5-12), and general (2-12) years of age.

Related Standards: Playground Site Considerations, Play Equipment | Modular Structures, Play Equipment | Swings, Safety Surfacing.

Materials and Finish

Play equipment shall be constructed of durable materials designed for frequent exterior use and high resistance to varied seasons and vandalism.

Products containing recycled materials shall be used.

Play equipment surfaces shall be slip resistant and drain efficiently.

Main structural components shall be one-piece construction, with a minimum of bolts and fasteners. Structures with excessive joints, rough welded corners, pinch points, or other sharp edges or points shall not be used.

Use of light or bright colors shall be minimized on components subject to frequent wear or contact.

Hardware and fasteners shall be stainless steel or treated with a rust proof finish.

Maintenance kits shall be provided for each play apparatus.

Manufacturer and/or identification number shall be clearly displayed on each apparatus.

Labels indicating the intended user age group shall be displayed on each play apparatus. Labels shall be located at transfer stations or other well visible areas. Large play structures may require multiple labels.

Features

Play equipment that has been recalled or not recommended by the Consumer Product Safety Commission.

The use of the following items shall be minimized: ropes and PVC coated components.

Crawl tubes, tube slides and enclosed play features shall have clear openings for viewing, or be positioned to have optimal site supervision.

PVC or other plastic coatings shall not be used on flexible components such as chains and cables.

Components with S-hook hardware shall not be used unless approved by the Director of Recreation, Parks and Cultural Activities.

Sand boxes are prohibited.

Toys not anchored to the ground are subject to the Removal of Unauthorized Toys from Playground Areas Policy.

PLAY EQUIPMENT

The Director of Recreation, Parks and Cultural Activities shall prohibit use of any additional equipment determined incompatible with these standards.

Installation

Install equipment consistent with manufacturer recommendations and industry safety specifications.

Equipment shall be permanently ground anchored, or surface mounted to an approved surface.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not be exposed above the approved safety surfacing.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the play equipment.

A warranty of 10 years minimum is required.

Play structures are anticipated to require replacement after 15-20 years based on normal and ordinary use.



Activity panel



Freestanding equipment



Themed playground

PLAY EQUIPMENT | CLIMBING NETS

Purpose

Climbing nets shall comply to this section.

General Information

Climbing nets shall be comply with the most current CPSC and ASTM safety standards and guidelines.

Climing nets shall be International Playground Equipment Manufacturers Association certified or equivalent.

Climbing nets shall meet the most current ADA/ ADAAG standards and guidelines.

Related Standards: Playground Site Considerations, Play Equipment, Play Equipment | Swings, Safety Surfacing.

Materials and Finish

Support posts shall be 3½ inch minimum diameter for preschool (2-5 years) age structures, and 5 inch minimum diameter for school (5-12 year) age structures.

Posts shall be structural steel or aluminum with double powder coated finish.

Clamp assemblies shall be one piece and rust resistant.

Rope fabric shall be UV stabilized high density polyester fiber.

Mounting hardware shall be marine grade stainless steel or galvanized metal.

Features

Rope color shall site specific and be subject to approval by the Director of Recreation, Parks and Cultural Activities.

Ropes with optional galvanized steel wire interior may be used.

Installation

Equipment shall be installed according to the manufacturers' recommendations and industry safety specifications.

Equipment shall be permanently ground anchored or surface mounted.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not become exposed above the approved safety surfacing.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the play equipment.

A warranty of 10 years minimum is required.

Individual play features are anticipated to require replacement after 10 years based on normal and ordinary use.

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PLAY EQUIPMENT | NATURE PLAY

Purpose

Nature play equipment shall conform to this section.

General Information

Nature play equipment shall be designed and manufactured to comply with the most current CPSC and ASTM safety standards and guidelines.

Components shall be International Playground Equipment Manufacturers Association certified or equivalent.

Playground equipment shall meet the most current ADA/ADAAG standards and guidelines.

Related Standards: Playground Site Considerations, Play Equipment, Play Equipment | Modular Structures, Play Equipment | Swings, and Safety Surfacing.

Materials and Finish

Posts shall be 3½ inch minimum diameter.

Lumber materials shall be pressure-treated wood.

Metal fasteners/materials shall be galvanized steel or aluminum treated for exterior, commercial use.

Pressure-treated lumber shall not be treated with Chromated Copper Arsenate (CCA).

Pressure-treated lumber shall be Alkaline Copper Quaternary (ACQ) or Copper Borate Azole (CA) type. When Alkaline Copper Quaternary (ACQ) lumber is used, fasteners shall be galvanized or stainless steel.

Features

Play equipment that has been recalled or not recommended by the Consumer Product Safety Commission.

The use of the following items shall be minimized: ropes and PVC coated components.

Crawl tubes, tube slides and enclosed play features shall have clear openings for viewing, or be positioned to have optimal site supervision.

PVC or other plastic coatings shall not be used on flexible components such as chains and cables.

Components with S-hook hardware shall not be used unless approved by the Director of Recreation, Parks and Cultural Activities.

Sand boxes and toys not anchored to the ground are prohibited.

Installation

Nature play equipment shall be installed according to the manufacturer's recommendations and industry safety specifications.

Equipment shall be permanently anchored.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not be exposed above the approved safety surfacing.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the play equipment.

A product warranty of 10 years minimum is required.

Nature play equipment are anticipated to require replacement after 15-20 years based on normal and ordinary use.

PLAY EQUIPMENT | NATURE PLAY



Nature Play Equipment

PLAY EQUIPMENT | MODULAR STRUCTURES

Purpose

Modular structures consist of several play components that are structurally linked or physically connected to each other.

General Information

Modular structures shall comply with the most current CPSC and ASTM safety standards and guidelines.

Components shall be International Playground Equipment Manufacturers Association certified or equivalent.

Playground equipment shall meet the most current ADA/ADAAG standards and guidelines.

Fully concealed areas are prohibited.

Deck dimensions and layouts shall not promote loitering or unintended use.

Related Standards: Playground Site Considerations, Play Equipment, Play Equipment | Swings, Safety Surfacing.

Materials and Finish

Support posts shall be 3½ inch minimum diameter for preschool (2-5 years) age structures, and 5 inch minimum diameter for school (5-12 year) age structures.

Posts shall be structural wood or metal with double powder coated finish. Wood posts to have metal post caps.

Deck clamp and play component connections to support posts shall be factory pre-drilled.

Clamp assemblies shall be one piece and rust resistant.

Features

Equipment decks shall be 6 feet maximum vertical height measured from the top of safety surfacing, unless approved by the Director of Recreation, Parks and Cultural Activities.

Roofs may be provided for shade and visual articulation. Roofs shall be powder coated perforated steel, fabric, or other approved weather resistant material.

Each play structure shall have inclusive play features.

Installation

Equipment shall be installed according to the manufacturers' recommendations and industry safety specifications.

Equipment shall be permanently ground anchored or surface mounted.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not become exposed above the approved safety surfacing.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the play equipment.

A warranty of 10 years minimum is required.

Modular structures are anticipated to require replacement after 15-20 years based on normal and ordinary use.

Individual play features are anticipated to require replacement after 10 years based on normal and ordinary use.

PLAY EQUIPMENT | MODULAR STRUCTURES



Modular play structure



Modular play structure



Modular play structure

PLAY EQUIPMENT | SWINGS

Purpose

Swing sets shall conform to this section.

General Information

Swing sets shall be designed and manufactured to comply with the most current CPSC and ASTM safety standards and guidelines.

Components shall be International Playground Equipment Manufacturers Association certified or equivalent.

Playground equipment shall meet the most current ADA/ADAAG standards and guidelines.

The standard swing is an arch-style frame. The standard height is 8 feet. Freestanding preschool-age swings shall be 7 feet vertical height.

There shall be at least one swing bay with one accessible seat.

Swing bays shall be continuous as space allows.

Swings shall be located to minimize circulation conflicts and the probability of conflicts with moving swings.

Single post T-frame swings shall be used where space is limited in preschool-age only play areas. T-frame swings shall have two enclosed infant seats.

Related Standards: Playground Site Considerations, Play Equipment, Play Equipment | Modular Structures, Play Equipment | Swings, and Safety Surfacing.

Materials and Finish

Metal posts and beams shall be 3½ inch minimum diameter with a powder coat finish. Wood posts shall be 5½ inch minimum diameter.

Surfaces shall be sloped to shed water.

Features

Accessible seats shall include easily lockable non-flexible harness, or other rigid restraining device approved by the Director of Recreation, Parks and Cultural Activities.

Enclosed infant seats shall have a solid handhold extending from the top of seat.

Chains shall be welded with galvanized or other corrosion resistant finish. Chain grade shall be #80 or have openings no more than ⅜ inch.

Seat and chain connections shall be a clevis type bolt link.

Belt seats shall be constructed of flexible black ethylene propylene diene monomer (EPDM) to resist cracking.

Installation

Swings shall be installed according to the manufacturer's recommendations and industry safety specifications.

Equipment shall be permanently anchored.

Equipment footings shall be installed within the existing subgrade. Top of footings shall not be exposed above the approved safety surfacing.

Belt swings to be installed in engineered wood fiber (EWF) may include a rubber wear mat 2 inches thick, minimum 52 inches long by 32 inches wide.

Life Cycle Expectations

Replacement parts shall be readily available for the life of the play equipment.

A product warranty of 10 years minimum is required.

Structures are anticipated to require replacement after 15-20 years based on normal and ordinary use.

Seats and chains are anticipated to require replacement after 3 years based on normal and ordinary use.

PLAY EQUIPMENT | SWINGS



Enclosed infant seat with solid handholds



Bolt through clevis

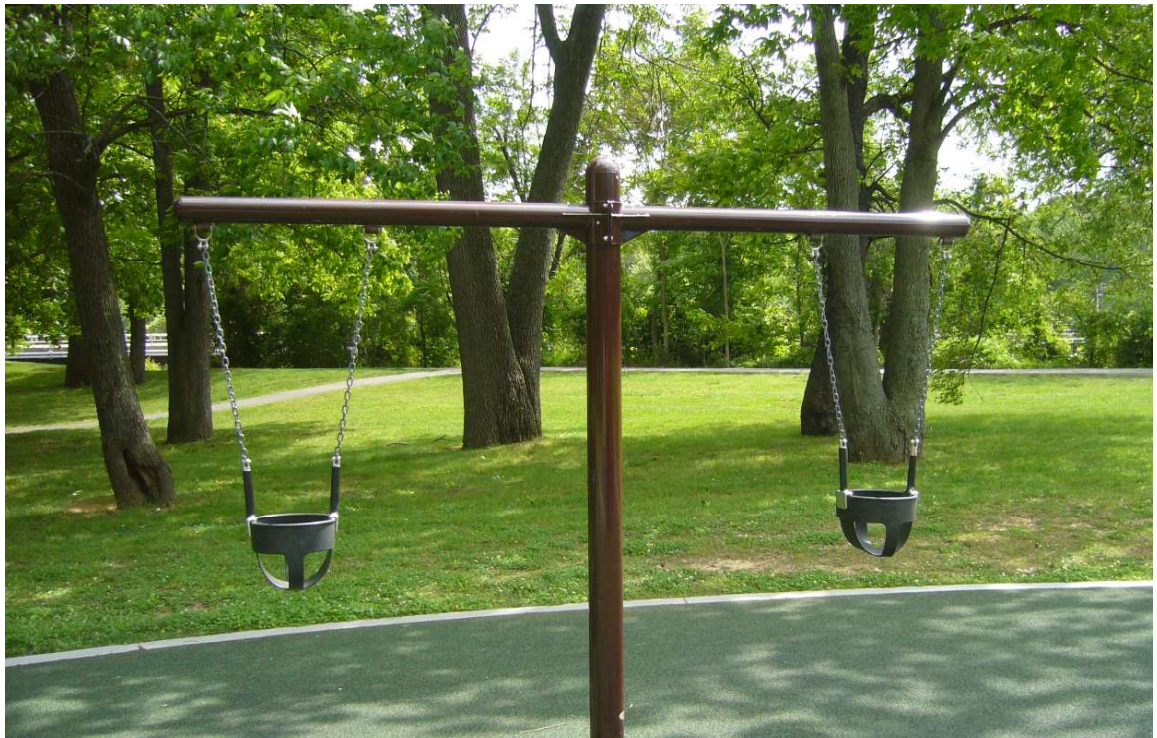


Anti-Wrap hangar



Belt Seat

PLAY EQUIPMENT | SWINGS



T-Frame Swing; Use only with enclosed infant seats



Two-bay swing set, arch frame; Shown with accessible seat, enclosed infant seat and two belt seats

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CHAPTER 7

BALL COURTS AND ATHLETIC FIELDS

Ball Courts

Court Diagram | Badminton

Court Diagram | Basketball

Court Diagram | Futsal

Court Diagram | Pickleball

Court Diagram | Tennis

Court Diagram | Volleyball

Fields

Fields Containment Area

Field Diagram | Baseball

Field Diagram | Baseball Little League

Field Diagram | Field Hockey

Field Diagram | Football

Field Diagram | Lacrosse Boys

Field Diagram | Lacrosse Girls

Field Diagram | Rugby

Field Diagram | Soccer

Field Diagram | Softball

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BALL COURTS

Purpose

Outdoor ball courts shall serve the recreation needs of the community for sport courts.

General Information

Ball courts shall comply with the most current National Federation of State High School Associations (NFSH) standards or other governing bodies as appropriate.

Ball courts shall have positive drainage.

Ball courts shall be accessible by pedestrian pathways.

Ball courts shall be optimally oriented north-south on the long axis, 11 degrees off axis.

Ball courts may be designed to serve multiple sports and optimize space.

Multi-purpose sport combinations may include tennis and futsal, tennis and pickleball, or other combinations where multiple uses can be safely accommodated. Minimum dimensions for each sport should be met in order to combine uses, including safety run out areas. All goals and equipment shall meet industry safety standards.

Related Standards: Fence | Chain Link, Court Surfacing | Color Coat, Bench | Player, Signs.



Tennis court

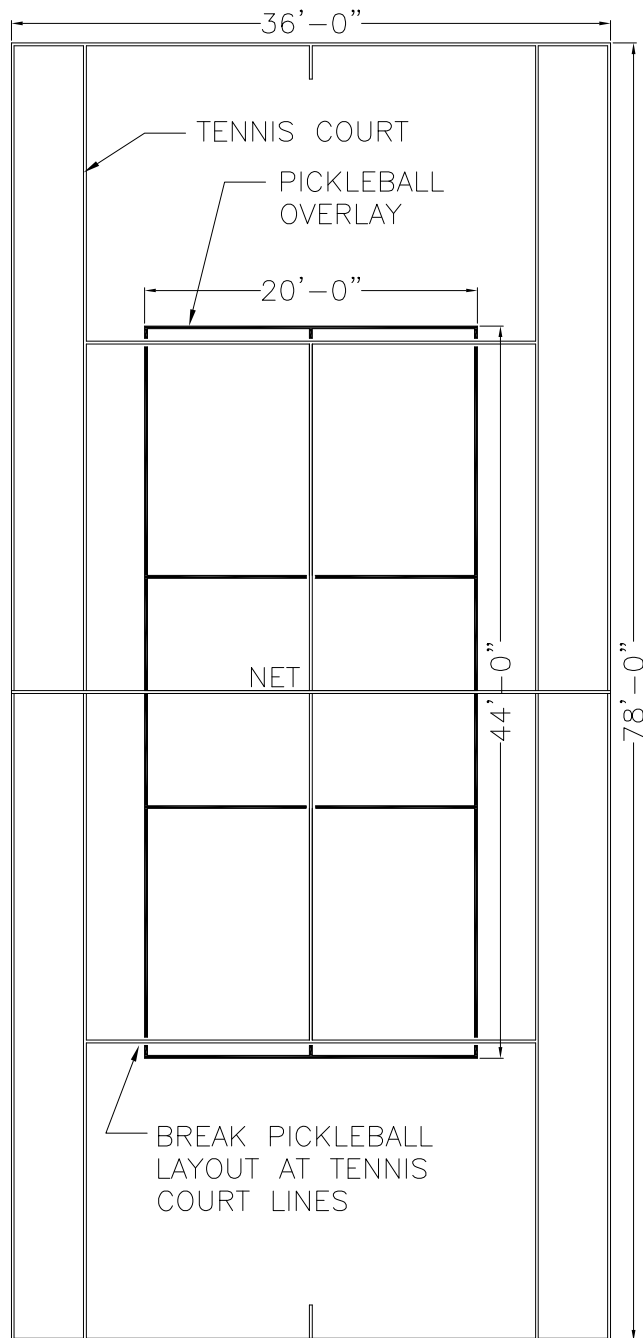


Basketball court



Multi-purpose court

BALL COURTS



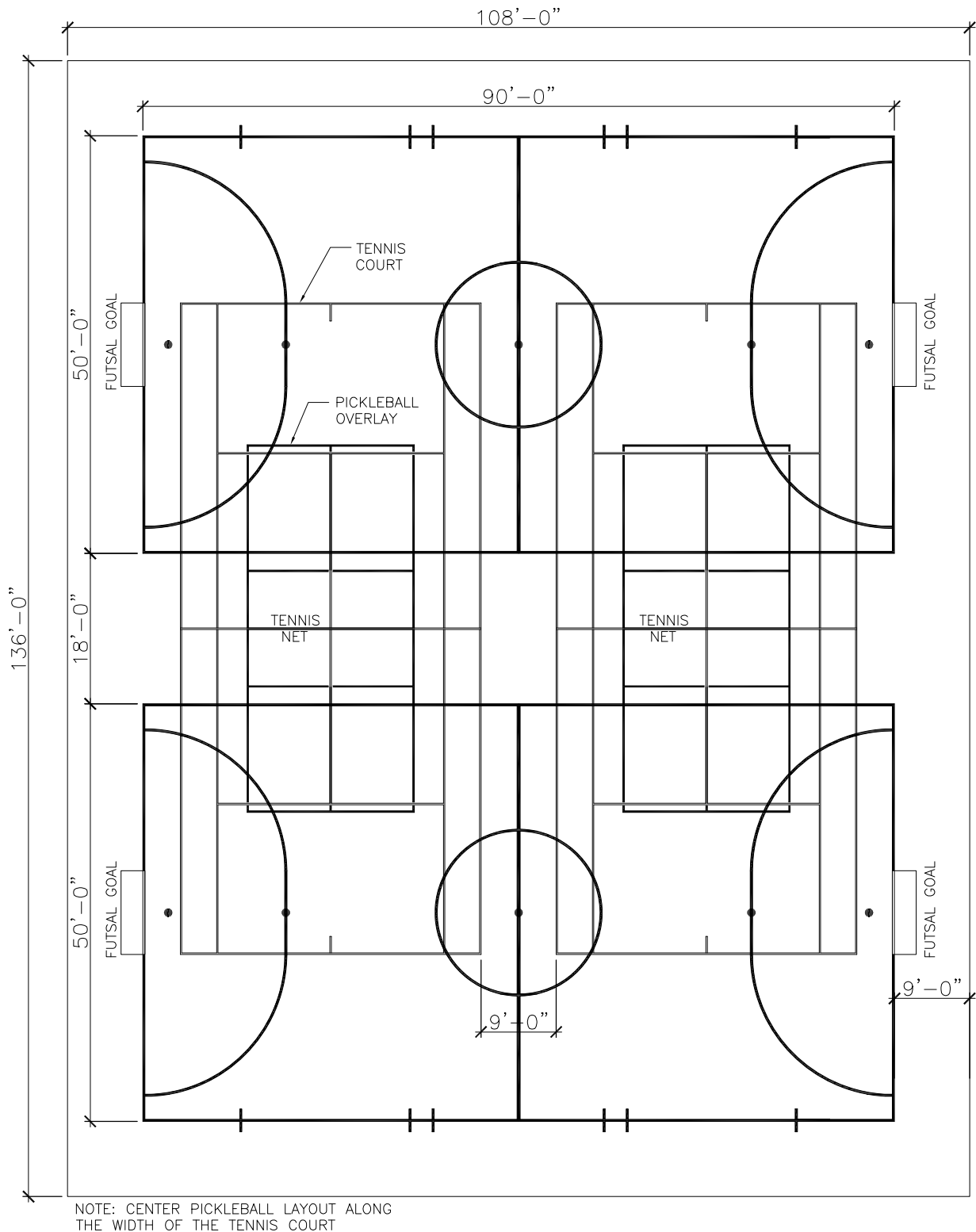
NOTE: CENTER PICKLEBALL LAYOUT ALONG THE WIDTH OF THE TENNIS COURT

Tennis & Pickleball Layout

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BALL COURTS

07



Multi-Purpose Court

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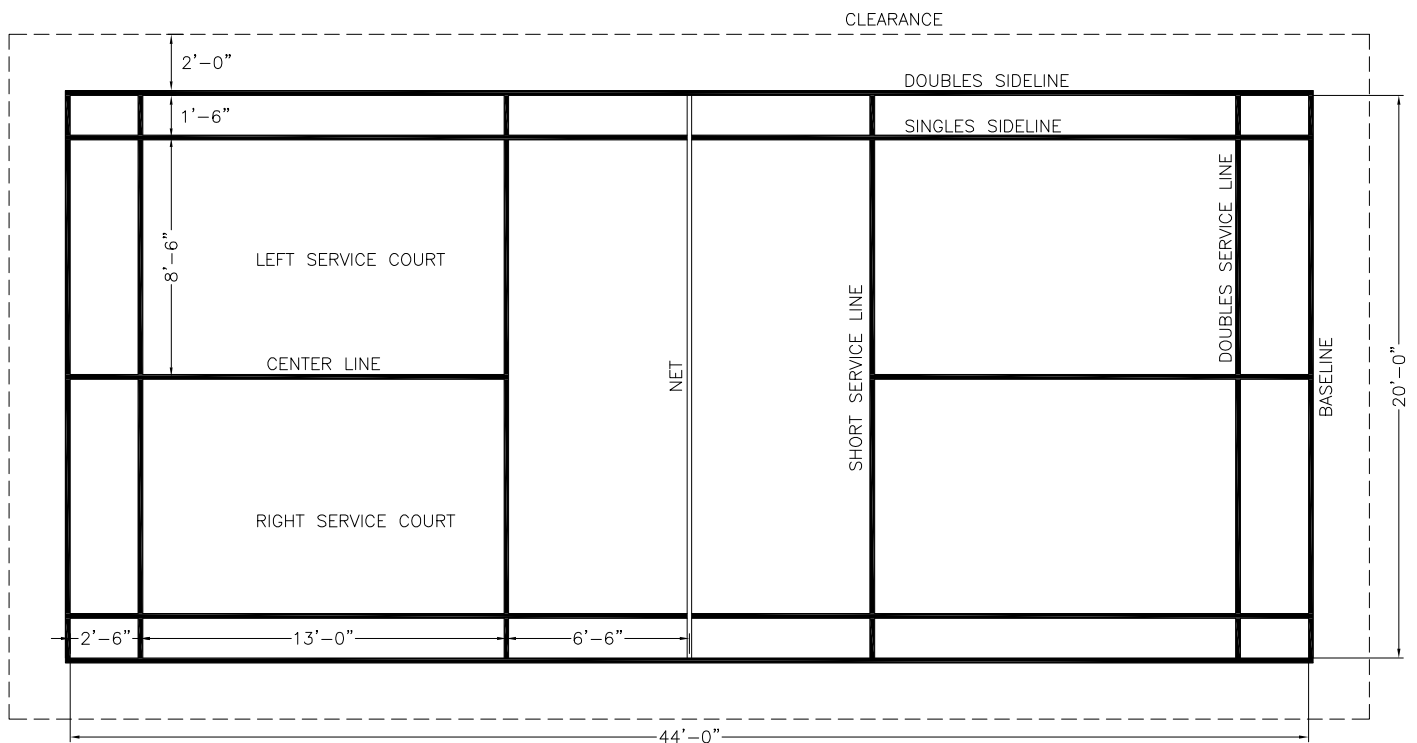
COURT DIAGRAM | BADMINTON

07

General Information

Court layouts shall conform to the most current USA Badminton standards or other governing bodies as appropriate.

Related Standards: Ball Courts, Fence | Chain Link, Site Furnishings Section, Bench | Player, Signs, Badminton Net Systems.



Court diagram

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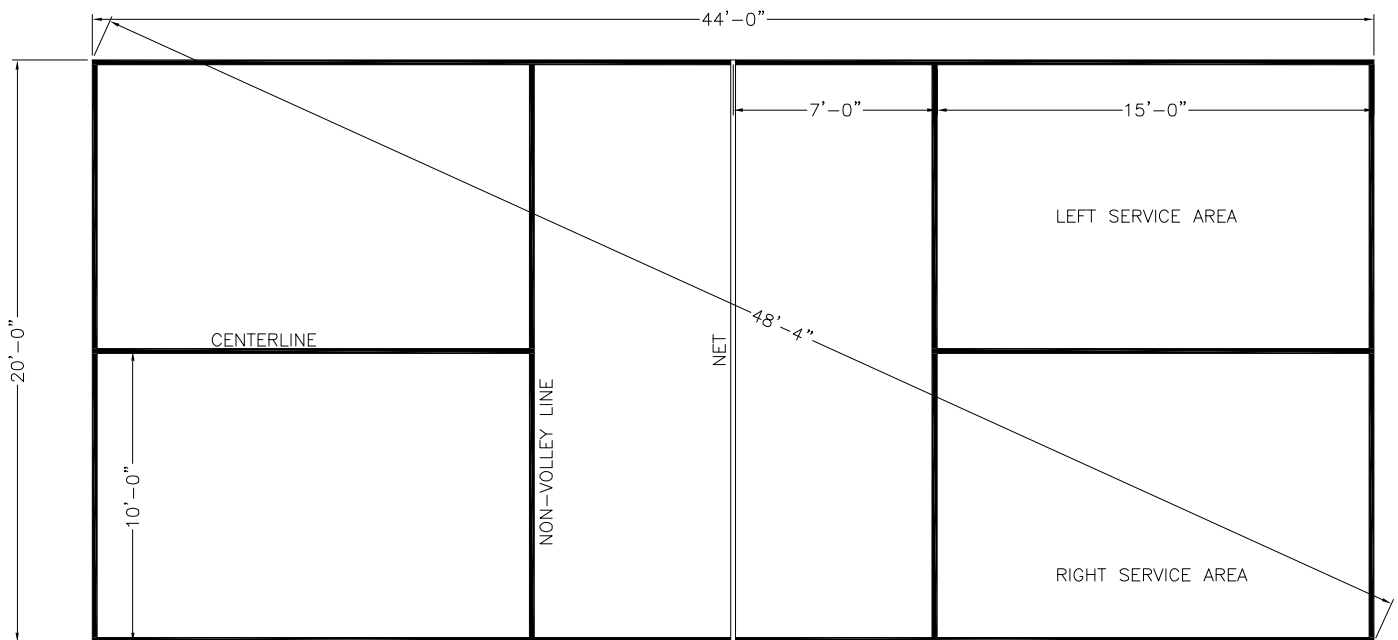
COURT DIAGRAM | PICKLEBALL

07

General Information

Court layouts shall conform to the most current USA Pickleball Association standards or other governing bodies as appropriate.

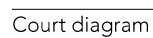
Related Standards: Ball Courts, Fence | Chain Link, Site Furnishings Section, Court Surfacing | Color Coat, Bench | Player, Signs, Tennis Net Systems.



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General Information

Related Standards: Ball Courts, Fence | Chain Link, Site Furnishings Section, Court Surfacing | Color Coat, Bench | Player, Signs, Tennis Net Systems.



City of Alexandria 2021

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FIELDS

Purpose

Outdoor athletic fields shall serve the recreation needs of the community.

General Information

Fields shall comply with the most current National Federation of State High School Associations (NFSH) standards or other governing bodies as appropriate.

Fields shall have positive drainage and shall be sloped to drain.

Fields shall be accessible by pedestrian pathways.

Rectangular fields shall generally be oriented in a north-south direction. Diamond fields shall be generally oriented in a north-northeast direction.

Fields may be designed to serve multiple sports and optimize space.

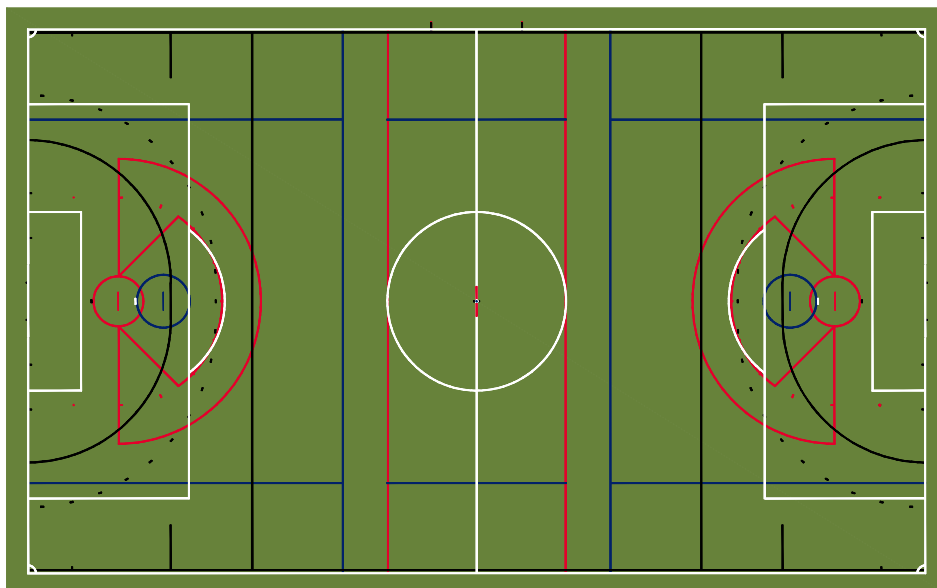
Related Standards: Fence | Backstop, Fence| Chain Link, Site Furnishings Section, Infield Mix, Track/ Warning Track Surfacing.



Rectangular field



Diamond field



Multi-purpose field

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FIELDS CONTAINMENT AREA

07

Purpose

Containment areas shall be provided at sports fields for the storage of sports equipment.

General Information

Containment areas shall be 30 feet minimum in width by 20 feet minimum in depth and be located at field ends for ease of use.

Containment areas shall be enclosed by fencing that is a part of the field perimeter fencing and open to field side.

Related Standards: Fence | Mow Strip, Fence | Gates/Latches.

Materials and Finish

Chain link fences shall be matte woodland/dark green in color. Within historic districts, chain link fences shall be matte black in color.

Chain link fabric shall be PVC coated, Class 2b, thermally fused and bonded.

Chain link fabric shall have a core wire diameter of 6 gauge. The diamond mesh shall be 2 inches without knots or ties, except as knuckling on the top and bottom of the fabric.

Fence end and corner posts shall be 6 inches outside diameter. Line posts shall be 2½ inches outside diameter. Rails/braces shall be 1½ inch outside diameter.

Chain link fence shall include a top and bottom rail. Fences over 6 feet in vertical height shall include a middle rail.

Surfacing shall be pervious paver.

Unit pavers include brick, asphalt, concrete and stone pavers that have ridges, joint openings, or other systems of providing space between unit pavers.

Pavers for use in exterior areas shall include a slip resistant finish.

Features

Two concrete anchor pads with brass eye bolts shall be provided to anchor goal posts.

Fence may include a concrete or stonedust mow strip.

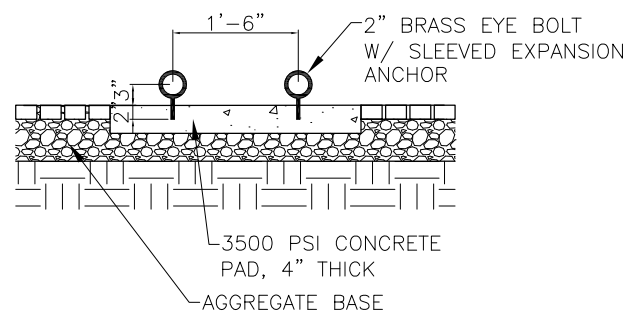
Life Cycle Expectations

A 1 year minimum warranty is required for fencing.

Chain link is anticipated to require replacement after 15-20 years of normal and ordinary use.

A 5 year minimum warranty is required for pavers.

Pavers are anticipated to be replaced after 40 years based on normal and ordinary use.



Goal Pad Detail

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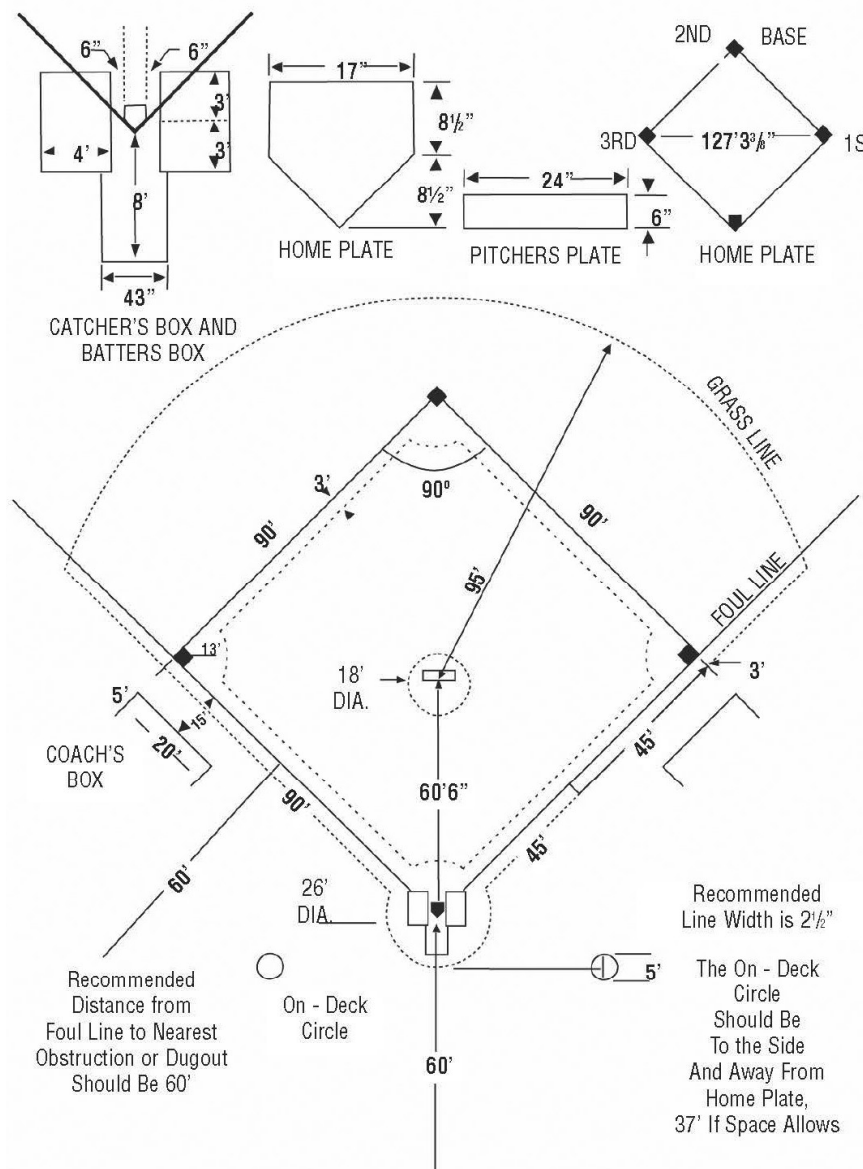
FIELD DIAGRAM | BASEBALL

07

General Information

Field layouts shall conform to the most current National Federation of State High School Associations (NFHS) standards or other governing bodies as appropriate.

Related Standards: Fields, Fence | Backstop, Fence | Chain Link, Site Furnishings Section, Infield Mix, Track/Warning Track Surfacing.



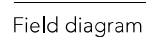
Field diagram

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General Information

Related Standards: Fields, Fence | Backstop, Fence | Chain Link, Site Furnishings Section, Infield Mix, Track/Warning Track Surfacing.



City of Alexandria 2021

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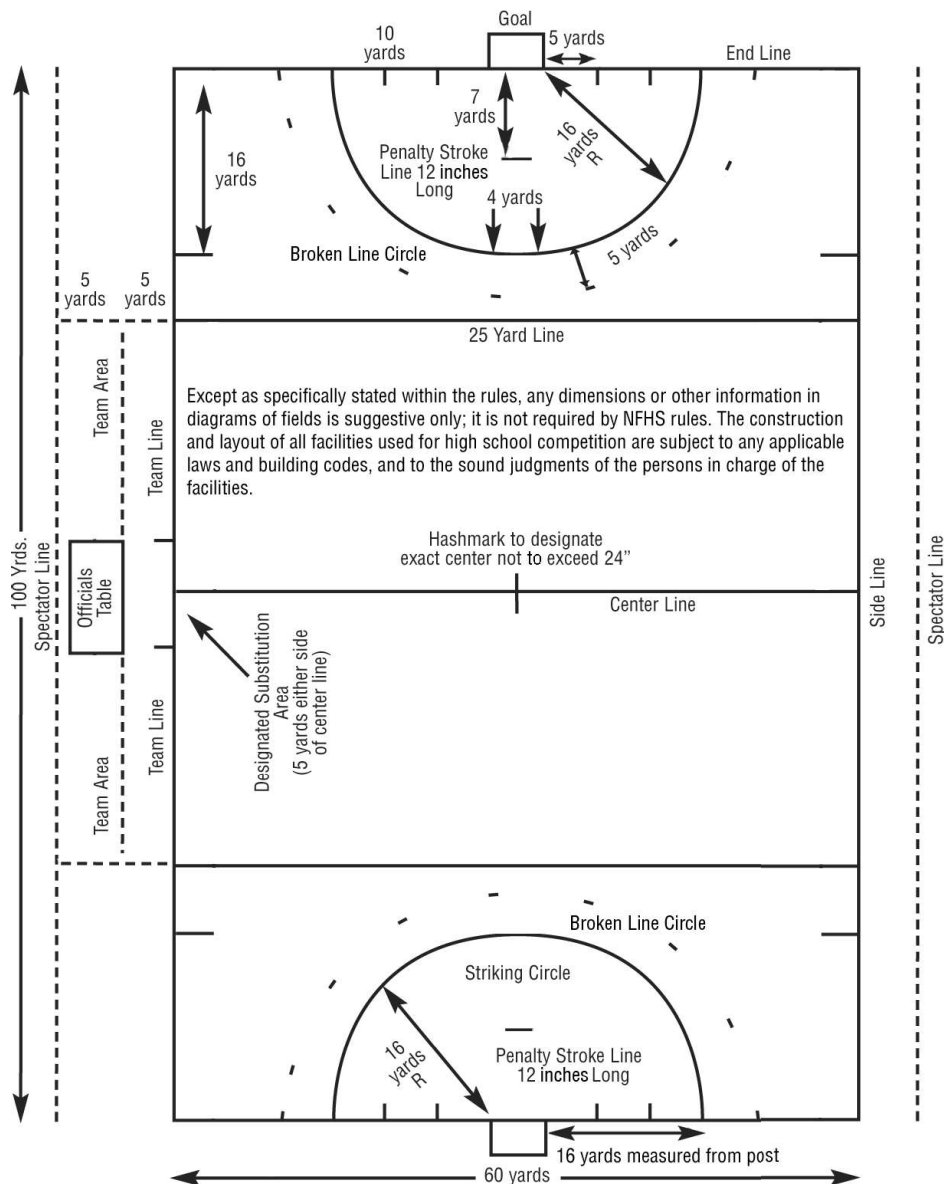
FIELD DIAGRAM | FIELD HOCKEY

07

General Information

Field layouts shall conform to the most current National Federation of State High School Associations (NFHS) standards or other governing body.

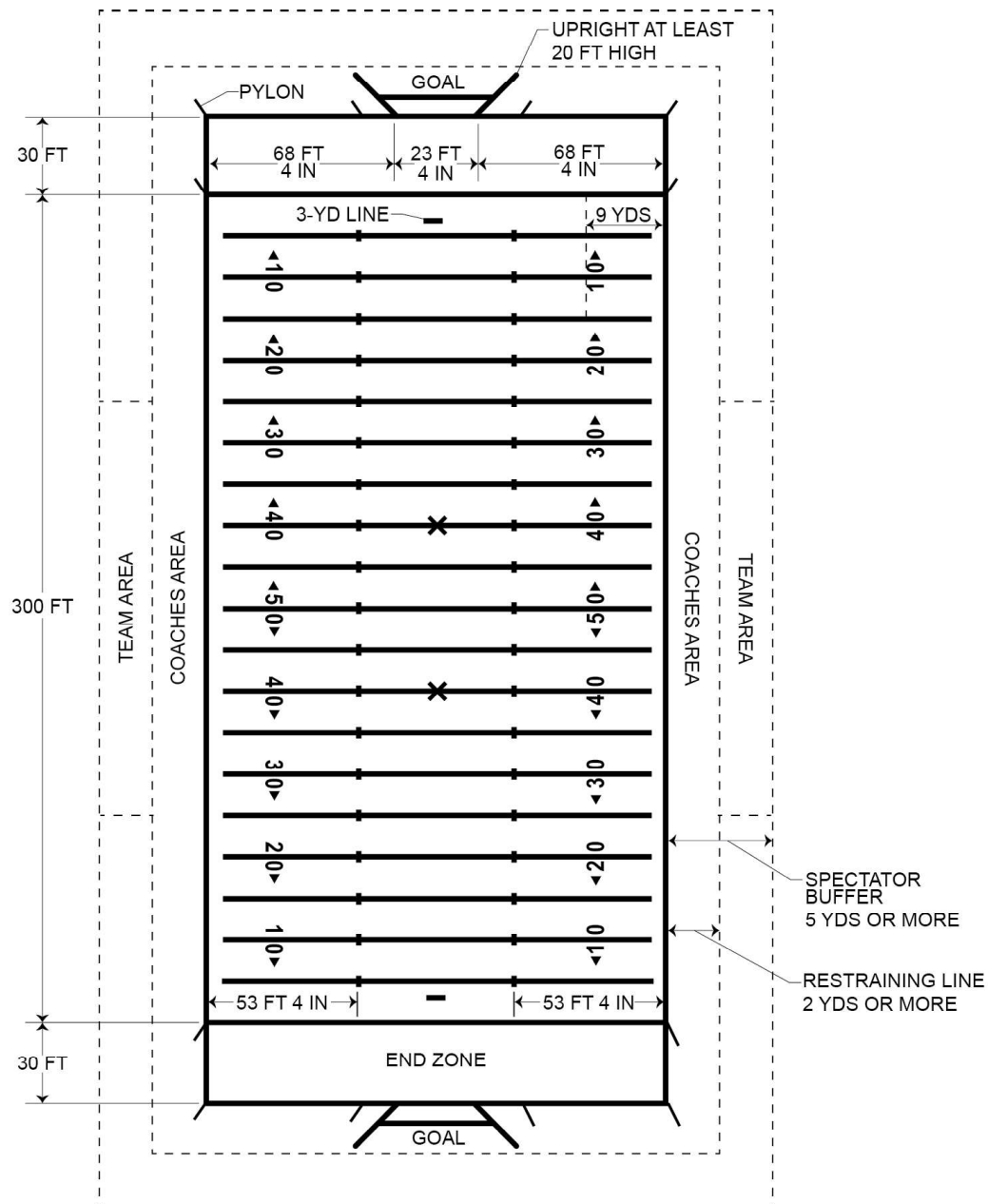
Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs.



NOTE: The grass should be cut to a height not to exceed 1½". The circle and endline hashmarks should all be measured from the goalpost.

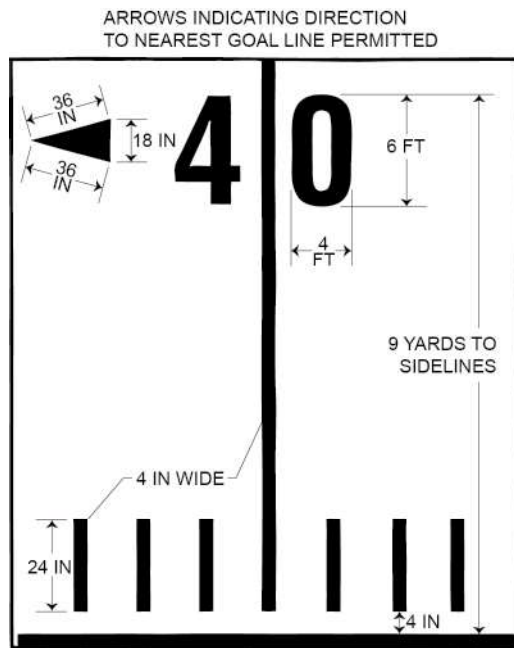
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Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs, Fences, Utility Systems.



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FIELD DIAGRAM | FOOTBALL



Field markings

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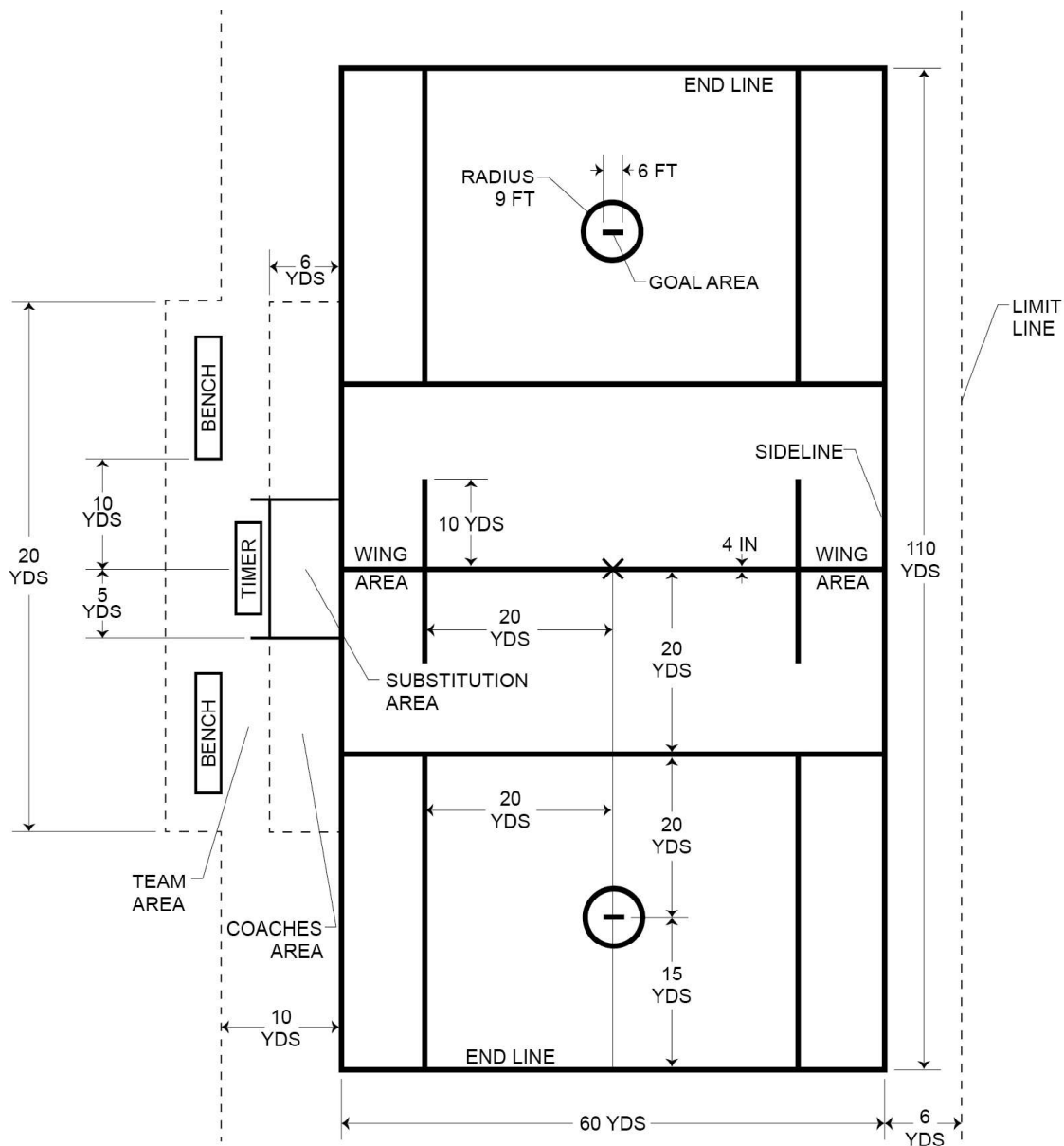
FIELD DIAGRAM | LACROSSE BOYS

07

General Information

Field layouts shall conform to the most current National Federation of State High School Associations (NFHS) standards or other governing bodies as appropriate.

Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs, Utility Systems.



Field diagram

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FIELD DIAGRAM | LACROSSE GIRLS

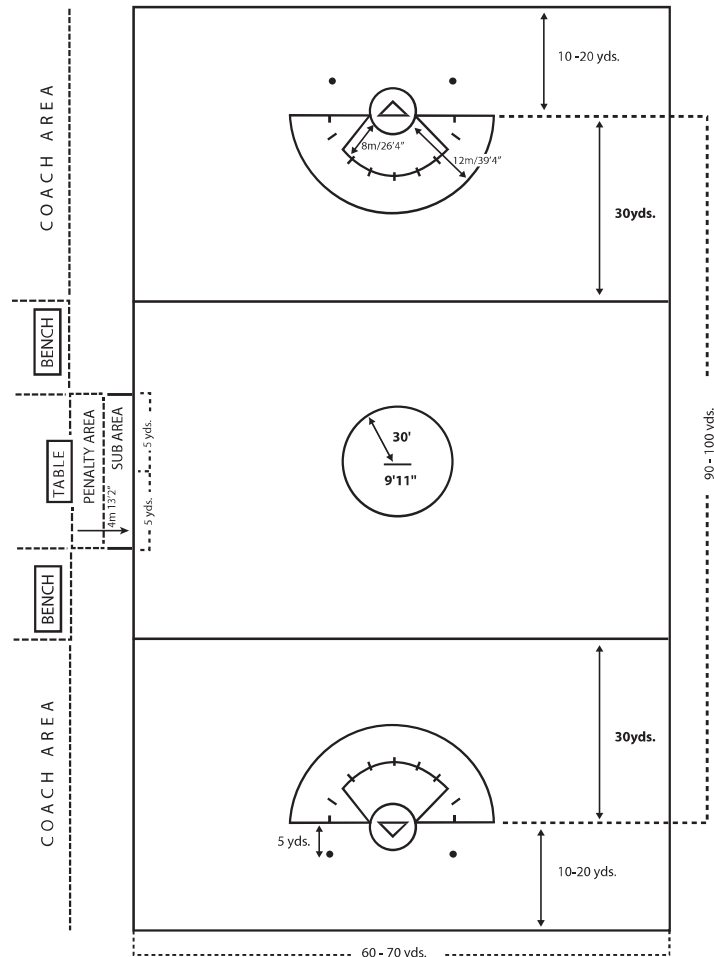
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General Information

Field layouts shall conform to the most current National Federation of State High Schools (NFHS) standards or other governing body.

Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs, Utility Systems.

WOMEN'S FIELD DIAGRAM



METRIC CONVERSIONS

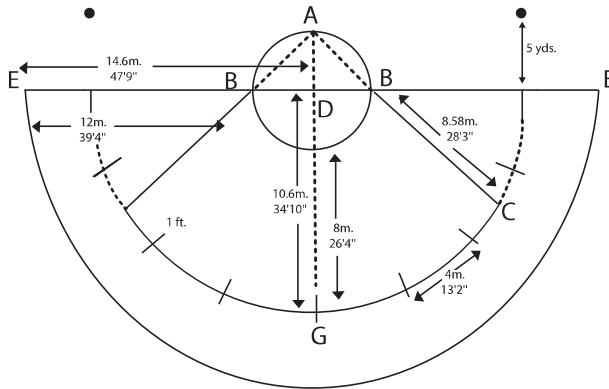
2M = 6'6"
 3M = 9'11"
 4M = 13'2"
 8M = 26'4"
 9M = 10 yd.

OTHER INFORMATION

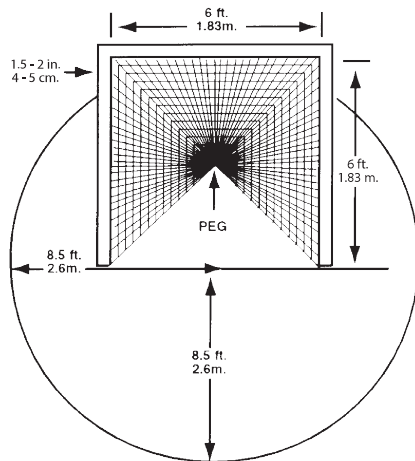
Hash Marks = 1'
 Guidelines = 6.5'
 Goal Line Width = 2"
 Width of Other Lines = 2-4"
 (Goal is placed on front of line)

FIELD DIAGRAM | LACROSSE GIRLS

8 METER ARC / 12 METER FAN



GOAL / GOAL CIRCLE



Field markings

Not to scale

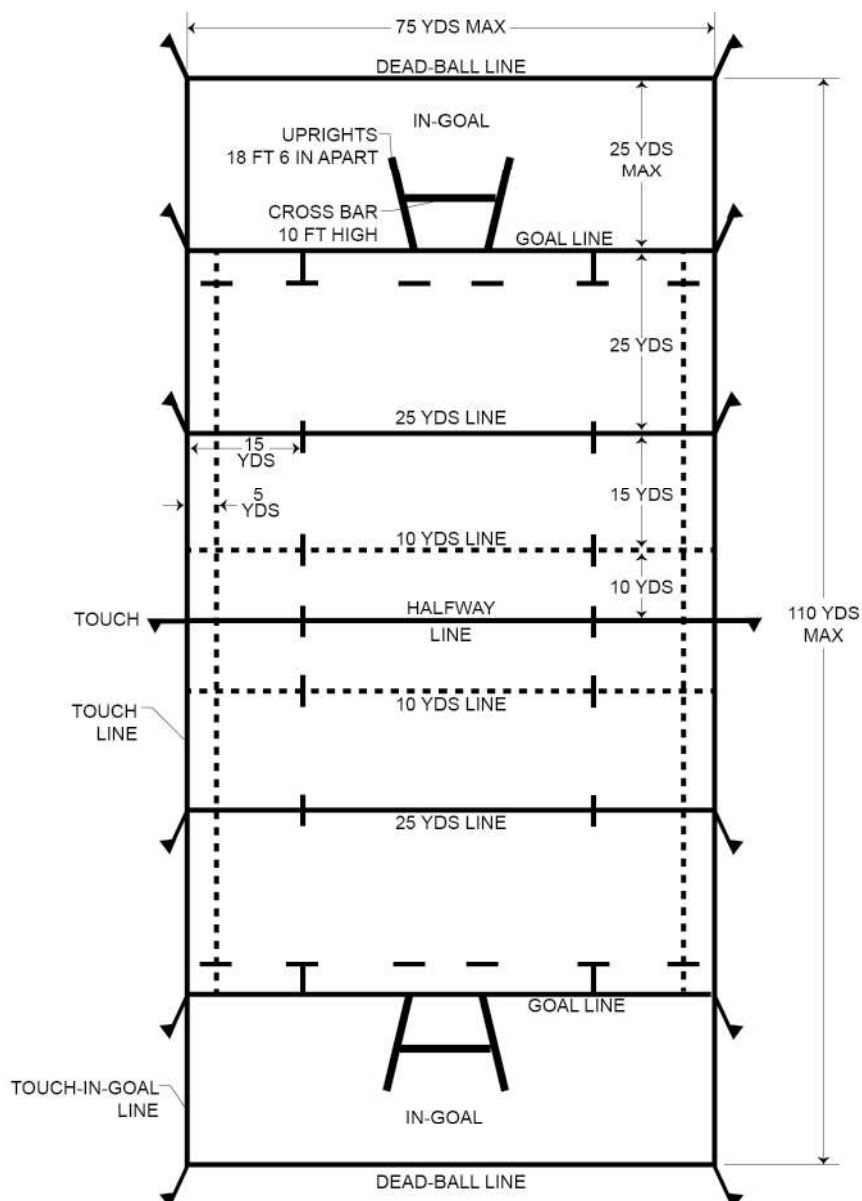
FIELD DIAGRAM | RUGBY

07

General Information

Field layouts shall conform to the most current National Federation of State High School Associations (NFHS) standards or other governing bodies as appropriate.

Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs, Utility Systems.



Field diagram

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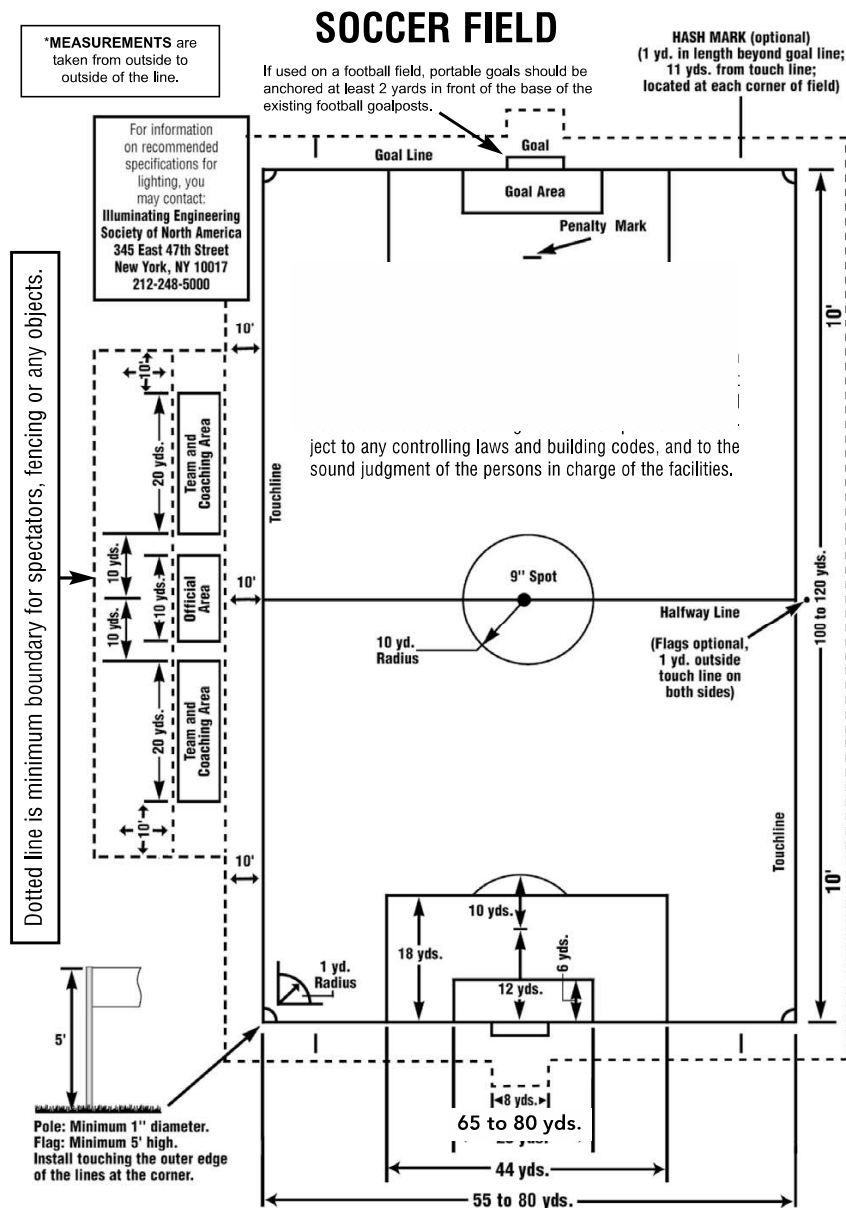
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FIELD DIAGRAM | SOCCER

General Information

Field layouts shall conform to the most current Federation Internationale de Football Association (FIFA), U.S. Soccer, U.S. Futsal, and the Alexandria Soccer Association) standards or other governing bodies as appropriate.

Related Standards: Fields, Fence | Chain Link, Site Furnishings Section, Signs.



Field diagram

Not to scale

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FIELD DIAGRAM | SOFTBALL

Game	Division	Bases (A)	Pitching (B)	Diamond Width (C)	Infield Radius (D)	Outfield Fence (E)
ADULT (per Amateur Softball Association of America)						
Fast Pitch	Women	60 ft	43 ft	84 ft 10 ¼ in	60 ft	200-250 ft
	Men	60 ft	46 ft	84 ft 10 ¼ in	60 ft	225-275 ft
Slow Pitch	Women	70 ft	50 ft	99 ft	70 ft	265-300 ft
	Men	70 ft	50 ft	99 ft	70 ft	300-315 ft
	Coed	70 ft	50 ft	99 ft	70 ft	275-300 ft
HIGH SCHOOL (per National Federation of High Schools)						
Fast Pitch	Female	60 ft	40 ft	84 ft 10 ¼ in	60 ft	185-235 ft
	Male	60 ft	46 ft	84 ft 10 ¼ in	60 ft	185-235 ft
Slow Pitch 12"	Female	60 ft	46 ft	84 ft 10 ¼ in	60 ft	250-275 ft
	Male	60 ft	46 ft	84 ft 10 ¼ in	60 ft	275-300 ft
Slow Pitch 11"	Female	65 ft	50 ft	91 ft 11 in	60 ft	250-275 ft

Field Sizes

CHAPTER 8

UTILITY SYSTEMS

Electrical Systems

Irrigation/Water Management Systems

Water Connections

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ELECTRICAL SYSTEMS

Purpose

Provide the necessary power systems for park facilities.

General Information

Systems shall be compliant with the NEC and Virginia Electrical Code.

Electrical power will be provided through Dominion Energy.

Materials and Finish

Electrical service enclosures shall be NEMA-3 standard enclosures, powder coated dark green.

Seal openings and bolt down areas with silicone.

Electrical components shall be UL labeled.

Conductors shall be THW or THWN copper.

Features

New electrical service shall be 240 volt 3-phase power where feasible.

Installation

Electric work shall be permitted with the City of Alexandria.

New electrical connections shall be installed underground in compliance with City of Alexandria Standards.

Transformers and electrical service enclosures shall be located outside of property setbacks. Selected locations shall be inconspicuous and outside of major use areas. Locations shall be selected to limit quantity of electrical conduit.

Electrical connections beneath paving shall be installed in industry standard sleeves.

Ballasts shall be located underground.

Screening for service enclosures and transformers shall comply with City of Alexandria Code.



NEMA-3 rated electrical enclosure

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IRRIGATION/WATER MANAGEMENT SYSTEMS

Purpose

Irrigation and water management systems shall be implemented to provide supplementary water for plantings and turf areas during periods of drought.

General Information

Irrigation systems shall be integrated with the City's Maxicom Central Control Irrigation System and current department irrigation specifications.

Standard irrigation components shall be manufactured by Rainbird or City approved equal.

Materials and Finish

Irrigation installations shall include communication devices to coordinate with the central controller including the following as applicable: cluster control unit, site satellite or radio antenna, flow sensor, and rain sensor. Small sites may be exempt at the determination of the Director of Recreation, Parks and Cultural Activities.

Valve boxes shall be heavy duty, H-20 loaded, Carson boxes with green covers. Boxes shall include 3 inches minimum vertical depth of gravel at the base and placed over a brick base.

Features

New irrigation installations shall include an accurate, complete, data report of all components installed, precipitation rates and water pressure/flow rates.

Irrigation systems may include drip, spray-head and turf rotors as applicable for site specific needs.

Installation

Irrigation components shall be installed in compliance with plans designed by a professional irrigator licensed in the Commonwealth of Virginia.

Irrigation installations shall be documented with as-built drawings detailing component type and information, location and connections.

Irrigation systems shall provide head-to-head coverage.

Installation documentation shall include field verified precipitation rates for input in the City's Maxicom central control system.

Life Cycle Expectations

Communication components shall be warranted for a minimum of 5 years.

Irrigation components shall be warranted for a minimum of 1 year.



Athletic field irrigation

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WATER CONNECTIONS

Purpose

Water connections shall be installed in parks and public open space for drinking fountains, ornamental fountains, interactive fountains, irrigation systems and maintenance use.

General Information

Water connections shall be installed by a certified professional licensed in the Commonwealth of Virginia.

Water service will be provided through Virginia American Water.

Connections shall be compliant with USBC Plumbing Code and other applicable plumbing and health codes.

Materials and Finish

Below grade enclosures shall be heavy duty, H-20 loaded, Carson irrigation boxes with green covers or City approved equal. In-ground valve boxes shall include 3 inches minimum vertical depth of pea gravel at the base.

Above grade backflow preventer and booster pump enclosures shall be marine grade aluminum. Color shall be stainless steel or dark green.



Securing cover for above grade backflow preventer

Features

Water meters are the property of Virginia American Water.

Connections shall have backflow preventers.

Installation

Water connections shall be installed beneath the frost line.

Water connections beneath pavement shall be installed as sleeved connections. Pavement shall be notched at sleeve locations.

Water meters locations shall be inconspicuous and outside of major use areas.



Above grade irrigation backflow preventer enclosure



Below grade irrigation securing enclosure

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CHAPTER 9

SIGNS

Biography Sign
Donor Type A Sign
Donor Type B Sign
Conservation Sign
Facilities Closure Sign
Information Kiosk
Lighting Instructions Sign
Park Regulatory Sign
Park Regulatory Sign Text
Nature Trail Sign
Stormwater Sign
Type A Sign
Type B Sign
Type C Sign
Type D Sign
Type E Sign
Type F Sign
Type G Sign
Type H Sign
Toy Removal Sign
Wayfinding Park Sign System

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BIOGRAPHY SIGN

Purpose

The Biography sign is a weather and vandal resistant sign for communicating a detailed description of a person's life.

General Information

Signs shall be located at park entrances in a central/ prominent location. Sign content shall include the name, birth year, death year, description and photograph of the person featured.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/16 inch thick aluminum with an attached aluminum backer plate.

Sign shall be 2 feet vertical dimension x 1 foot 6 inches horizontal dimension. Corners shall have .75 inch radius.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Installation

Backer plate shall be mounted on a 30 degree angle plate attached with galvanized hardware, attached to a 2½ inch square single aluminum post.

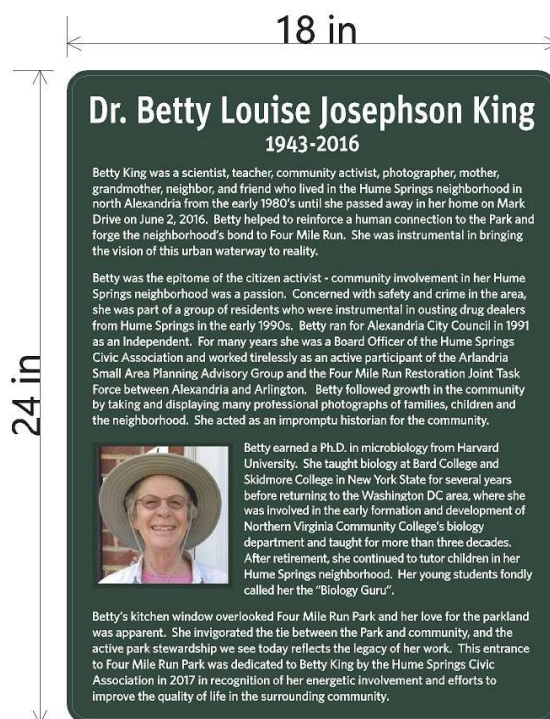
Signs shall be mounted 2 feet-2 inches vertical distance from the bottom of the sign to adjacent finish grade and level.

Sign and post shall be placed on a 30 degree angle.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Biography sign

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DONOR TYPE A SIGN

Purpose

Donor sign type A is a weather and vandal resistant sign for communicating donations from individuals or groups to park projects.

General Information

Signs shall be located in a central/prominent location. Sign content shall include the donation, project and donor information. A graphic applicable to the project can be included.

The sign shall include language about the partnership between an organization and the City.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/16 inch thick aluminum.

Sign shall be 12 inches vertical dimension by 9 inches horizontal dimension. Corners shall have .75 inch radius.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Installation

Signs shall be mounted on a 2 1/2 inch square single aluminum post or as approved by of the Director of Recreation, Parks, and Cultural Activities.

Signs mounted on post shall be 6 feet 5 inches vertical distance from the top of the sign to adjacent finish grade and level.

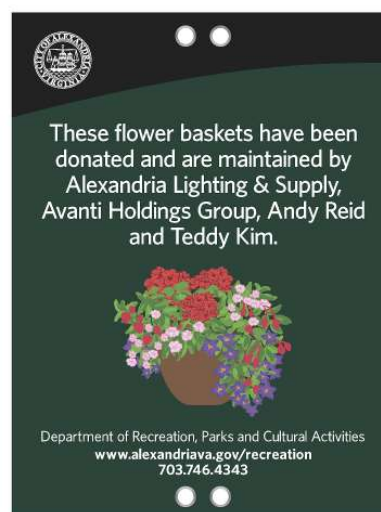
Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Donor Sign Example



Donor Sign Example

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DONOR TYPE B SIGN

Purpose

Donor sign type B is a weather and vandal resistant sign for communicating donations from multiple individuals or groups to park projects.

General Information

Signs shall be located in a central/prominent location. Sign content shall include the donation, project and donor information. A graphic applicable to the project can be included.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/16 inch thick aluminum.

Sign shall be 36 to 50 inches vertical dimension by 24 inches horizontal dimension. Corners shall have .75 inch radius.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Installation

Signs shall be mounted on a 2½ inch square single aluminum post or as approved by the Director of Recreation, Parks, and Cultural Activities.

Signs shall be mounted 6 feet 5 inches vertical distance from the top of the sign to adjacent finish grade and level.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Donor Sign Example

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CONSERVATION SIGN

Purpose

The conservation sign is a weather and vandal resistant sign for communicating native plant conservation zones.

General Information

Signs shall be located in a central/prominent location. Sign content shall include the type of conservation zone and a brief description. A graphic applicable to the project can be included.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/8 inch thick aluminum.

Sign shall be 18 inches vertical dimension by 12 inches horizontal dimension. Corners shall have .75 inch radius.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Installation

Signs shall be mounted on a 2½ inch square single aluminum post or U channel post.

Signs mounted on a post shall be 5 feet 0 inches vertical distance from the top of the sign to adjacent finish grade and level.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Conservation Sign Example



Conservation Sign Example

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FACILITIES CLOSURE SIGN

Purpose

The facilities closure sign is a weather and vandal resistant flip sign for communicating the use status of athletic fields, courts, and playgrounds.

General Information

Signs shall be aluminum and include a backboard with one flip panel.

Materials and Finish

Sign shall be 2 feet vertical dimension by 2 feet horizontal dimension.

Sign flip panels shall be 1 foot vertical dimension by 2 feet horizontal dimension.

Sign backboard and flip panel shall have bright white reflective backgrounds.

Sign backboard text shall read 'Field Closed' in red letters. Red shall be PMS 485 C.

Sign flip panel text shall read 'Field Open' in green letters. Green shall be PMS 370 C.

Installation

Signs shall be mounted on the field perimeter fence at the central/prominent access gate. Signs shall be attached using 9 gauge wire or screen clamps, coated to match the fence fabric.

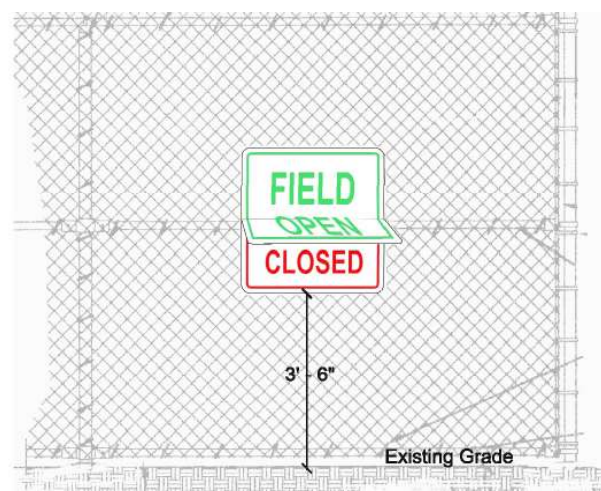
Signs shall be mounted on the fence 3 feet-6 inches vertical distance from the bottom of the sign to adjacent finish grade and level.

Flip panel shall be lockable to secure the panel to the fence.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Facilities closure sign

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INFORMATION KIOSK

Purpose

The information kiosk is a weather and vandal resistant location for the posting of temporary and seasonal programming, rule changes and safety information. Posted content shall also include park manager contact information, 311 contact information, facility rental information and Recreation, Parks, and Cultural Activities communications.

General Information

Information kiosks shall be comprised of a message board, vandal-proof glass or acrylic display panel, and a small roof to protect the contents from the weather.

The standard information kiosk is the Barco, Medium Message Center, model KMC2145 in black, or City approved equal.

Materials and Finish

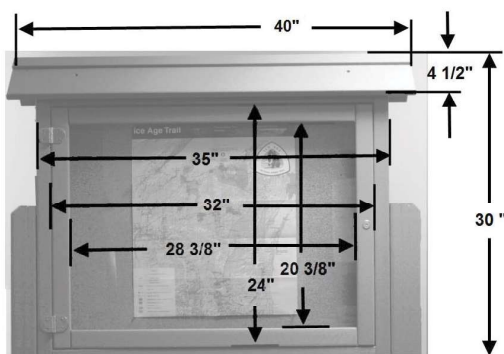
Information kiosks shall be constructed of weather resistant recycled plastic, resin or composite resin composed of 50% wood fiber and 50% polyethylene or fiberglass.

Free-standing kiosks shall be supported by 4 inch by 4 inch posts (nominal dimensions).

Free-standing kiosks shall be double sided.

The interior display panel shall have a water and weather tight seal.

Interior display panels shall have a lock mechanism.



Kiosk elevation

Features

Low energy, LED lighting is available.

Colored, recycled rubber mounting board or cork panels are available for the message board.

Installation

Information kiosks must be installed permanently through a surface bolt or in-ground system, consistent with the manufacturer's recommendation.

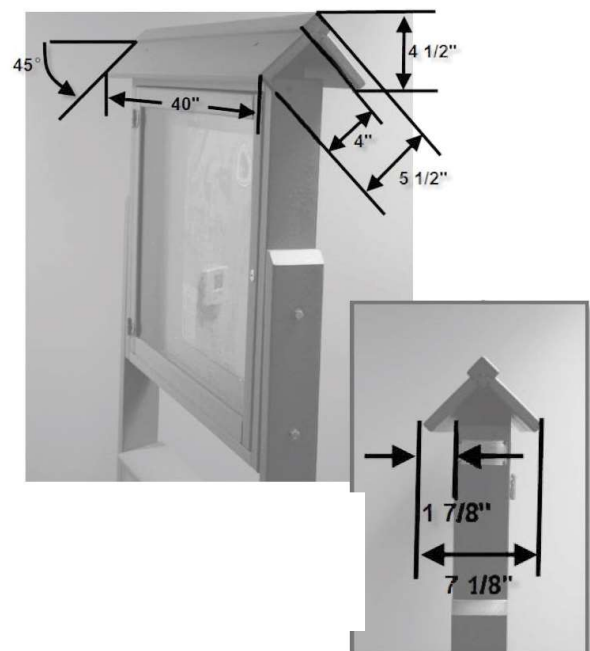
Kiosks shall be installed adjacent to pathways and parallel to the direction of travel. Kiosks installed perpendicular to the pathway shall include a concrete viewing pad parallel to the kiosk of equal width. Kiosk location should also be coordinated with other park signage to avoid sign clutter.

Coordinate installation with Park Planning Staff.

Life Cycle Expectations

A 10 year minimum warranty is required.

Structures are anticipated to require replacement after 15-20 years based on normal and ordinary wear.



Kiosk section

INFORMATION KIOSK



Information Kiosk

LIGHTING INSTRUCTIONS SIGN

Purpose

The lighting instructions sign is a weather and vandal resistant sign for communicating the operations of court lights.

General Information

The lighting instructions sign shall be located above the light push button control.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/16 inch thick aluminum.

Sign backboards shall be 18 inches vertical dimension by 12 inches horizontal dimension. Corners shall have 1.5 inch radius.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Rear of sign shall be coated to color match the front of sign.

Installation

Signs can be mounted on a light post with 2 band bracket attachments. The bracket shall not have any sharp ends or protrusions.

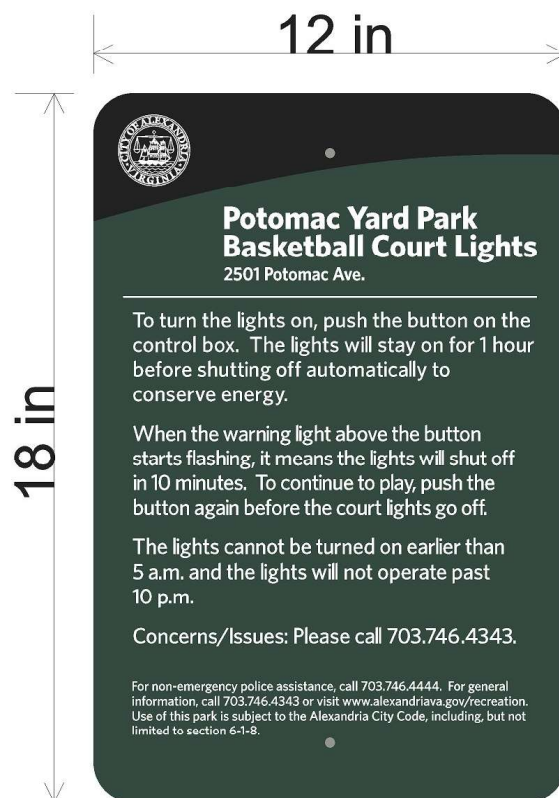
Signs can be mounted on the perimeter fencing using 9 gauge wire or screen clamps, coated to match the fence fabric.

Signs shall be mounted 6 feet 5 inches vertical distance from the top of the sign to adjacent finish grade and level.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Lighting Instructions Sign

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PARK REGULATORY SIGN

Purpose

Permanent regulatory information such as park hours, rules, regulations, emergency contact information and non-seasonal programming shall be posted at all parks.

General Information

Signs shall clearly state the name of the park, the City of Alexandria as the park operator, and a contact number to report safety issues.

Signs shall be posted in unobstructed viewsheds near activity centers or park entrances.

Sign text can be bilingual.

Consistent with the Code of Alexandria, new language shall be approved by the City Manager. and text is enforceable only if it complies with section 6-1-8 of the code.

Materials and Finish

Materials shall be durable, reflective, weather resistant, vandal resistant, UV resistant and low-glare.

Sign graphics, colors and fonts shall coordinate with the City of Alexandria Wayfinding Program.

Sign shall be 1/8 inch thick aluminum.

Installation

Signs shall be permanently affixed to fences or attached to a standard post per the methods identified in the City of Alexandria Wayfinding Program Manual.

Signs shall not be posted at a height greater than 40 inches from finish grade to the center of the sign board.

At time of installation, outdated or repetitive signage shall be removed.

Features

Signs shall not vary from the template provided by the Director of Recreation, Parks and Cultural Activities.

Signs shall use Forest Green (Pantone 560) in the frame.

Sign frame font shall be FF Unit Medium.

Sign information font shall be Whitney Medium.

Signs shall be the following sizes as determined by location, size of park, and visibility: 18 x 24, 24 x 24, 24 x 36, or 36 x 48 inches.

QR codes shall be provided for Dog Park signs.

Signs shall be oriented in a portrait direction.

Authorized signs are approved for the following special areas:

- Courts
- Dog Parks
- Fields/Active Recreation Sites
- Interactive Fountains
- Natural Areas
- Picnic Areas
- Playgrounds
- Ponds and Streambeds
- Residential Neighborhoods
- Waterfront, including Marina

Life Cycle Expectations

Signs are anticipated to require replacement after 10 years based on normal and ordinary wear.

PARK REGULATORY SIGN

All Park Areas

(except user specific, such as dog parks, Waterfront parks, athletic fields/synthetic turf, etc.)

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet.
- Use trash cans to dispose of all waste.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.



Regulatory Park Sign

PARK REGULATORY SIGN TEXT

Purpose

Park regulatory sign text shall use park regulator sign base text and site specific text. Additional sign text may be added to sign within the General Information Section.

General Information

The Department of Recreation, Parks and Cultural Activities may use the additional following text for park signs throughout the park system as applicable.

- For parks without commuter trails or lighted areas: Park hours are from sunrise to sunset, except by permitted use.
- For parks with commuter trails, lit areas, and/or waterfront parks: Park hours are from 5 am to 10 pm.
- Park rules prohibit:
 - For parks with parking lots:
 - Vehicle maintenance.
 - For sensitive historic areas, such as areas with unmarked graves:
 - Dogs in this historic area, except service animals.
 - For parks with parking lots:
 - Vehicles only allowed in designated parking areas, except City vehicles and permitted uses.
 - For any park:
 - Riding or operating any bicycle or micromobility device per section 10-1-1.
 - Grilling.

PARK REGULATORY SIGN TEXT

Tennis Courts

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Use trash cans to dispose of all waste.
- Park Rules Prohibit:
 - Amplified sound, except by permitted use
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Dogs on courts, except service animals.
 - Camping or using the park as living accommodations.
 - When players are waiting, the following time limits will be in effect:
 - Singles - 1 Hour
 - Doubles - 1 and One Half Hours
 - Individual Practice - 20 Minutes.
 - Court etiquette is expected by all players which includes no profanity or other activities which may distract or harm other players or bystanders.
 - The Department of Recreation, Parks and Cultural Activities reserves the right to schedule class instruction, lessons, camps, tournaments or other activities. Only authorized individuals may provide instruction or private lessons. Failure to comply may result in the loss of court privileges.

- Reservations may be made up to seven days in advance of the desired play date by calling the Department of Recreation, Parks and Cultural Activities at 703.746.4343.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

Residential Neighborhoods

This is a residential neighborhood. Please be kind to your neighbors

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet
- Use trash cans to dispose of all waste.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

PARK REGULATORY SIGN TEXT

Unfenced Dog Exercise Areas

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Use trash cans to dispose of all waste.
- All dogs must be under the owner's/handler's control.
- Only three dogs per person (owner/handler) are allowed.
- All dog handlers must have a leash in hand at all times.
- No female dogs in heat are allowed.
- Only dogs 4 months and older are allowed.
- Dogs must be legally licensed, vaccinated and wearing both current tags.
- Dog owners/handlers must keep their dog(s) in view at all times.
- Any bite of a person or other dog must be immediately reported to Alexandria Animal Control and parties involved must wait for an officer to respond, except in the case where immediate medical care is needed.
- Dog owners/handlers must immediately pick up and dispose of, in trash receptacles, all dog feces.
- Aggressive dogs are not allowed at any time. An aggressive dog is defined as a dog posing a threat to human beings or other dogs. Owner/handlers are legally responsible for their dog(s) and any injury or damage to facilities caused by them. Dogs must be on leash when entering and exiting.
- Report violations to Alexandria Animal Control 703-746-4774.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
- The following City Codes apply to the park 6-1-2.2, 5-7-35, 5-7-42, 5-7-40, 5-7,38, 5-7-47

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

PARK REGULATORY SIGN TEXT

Fenced Dog Exercise Areas

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Use trash cans to dispose of all waste.
- All dogs must be under the owner's/handler's control.
- Only three dogs per person (owner/handler) are allowed.
- All dog handlers must have a leash in hand at all times.
- No female dogs in heat are allowed.
- Only dogs 4 months and older are allowed.
- Dogs must be legally licensed, vaccinated and wearing both current tags.
- Dog owners/handlers must keep their dog(s) in view at all times.
- Any bite of a person or other dog must be immediately reported to Alexandria Animal Control and parties involved must wait for an officer to respond, except in the case where immediate medical care is needed.
- Dog owners/handlers must immediately pick up and dispose of, in trash receptacles, all dog feces.
- Aggressive dogs are not allowed at any time. An aggressive dog is defined as a dog posing a threat to human beings or other dogs. Owner/handlers are legally responsible for their dog(s) and any injury or damage to facilities caused by them. Dogs must be on leash when entering and exiting.
- Children under the age of 16 must be accompanied by an adult when inside a Fenced Dog Park.
- Food is not allowed inside the Fenced Dog Park, non-alcoholic beverages are allowed.
- Report violations to Alexandria Animal Control 703.746.4774.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
- The following City Codes apply to the park 6-1-2.2, 5-7-35, 5-7-42, 5-7-40, 5-7,38, 5-7- 47

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

PARK REGULATORY SIGN TEXT

Fields/Active Recreation Sites

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Use trash cans to dispose of all waste.
- Permit holders have priority use of fields.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Dogs on fields, except service animals.
 - Camping or using the park as living accommodations.
 - Dogs on field.
 - Golfing.
 - Grilling.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

Natural Areas

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet
- Use trash cans to dispose of all waste.
- Stay on trails to protect native plants and to avoid poison ivy
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
 - Feeding the wildlife.
 - Allowing your pet in the water.
 - Fishing except where posted.
 - Entering the water, swimming, or wading.
 - Disturbing park wildlife or plants.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

PARK REGULATORY SIGN TEXT

Interactive Fountains

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet.
- Use trash cans to dispose of all waste.
- No lifeguard on Duty. Adult supervision is required at all times for children age 12 and under
- No pets or animals are allowed in the fountain area
- No skateboards, roller blades, or bikes are allowed in the fountain
- No beach furniture or water toys are allowed in the fountain area
- No food, drink, or glass containers are allowed in the fountain area
- Do not allow trash, human waste, or blood to enter the fountain
- Do not drink the water
- Appropriate swimwear must be worn at all times. Shoes/non-slip water shoes must be worn at all times
- Children not toilet trained must wear swim diapers
- Any person having an obvious skin disease, nasal or ear discharge, inflamed eye, or any communicable disease with symptoms of diarrhea or vomiting shall be excluded from the facility
- Do not climb on the fountain equipment
- Emergencies: Call 9-1-1

- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.

Use of this park is subject to the Alexandria City Code, including, but not limited to Section 6-1-8 and the City of Alexandria Aquatic Health Ordinance. For non-emergency police assistance, call 703.746.4444. For general recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

PARK REGULATORY SIGN TEXT

Picnic Areas

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet.
- Use trash cans to dispose of all waste.
- Vehicles only permitted in designated parking areas
- Fires are permitted in park grills only.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
 - Grilling only allowed in permitted areas.
 - Organized sports in picnic areas.
- Picnic areas available by reservation April-October; to reserve please call 703.746.4343
- Keep play equipment and its perimeters free of obstructions and loose objects
- Children shall use age-appropriate equipment
- Avoid use of equipment when surfaces are wet or hot
- Proper footwear required
- Playground rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
 - Dogs in playground area
 - Glass or other breakable objects
 - Skateboards, roller skates or roller blades.
 - Riding or operating any bicycle or micromobility device per section 10-1-1.
 - Outside toys left in the playground area.
 - Children unaccompanied by an adult.
 - Grilling.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

Playgrounds

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Use trash cans to dispose of all waste.
- Vehicles only permitted in designated parking areas
- Children shall be accompanied by an adult

PARK REGULATORY SIGN TEXT

Ponds

- Park hours are from sunrise to sunset, except by permitted use. (Or) Park hours are from 5 am to 10 pm.
- Dogs must be on a leash and handlers must clean up after their pet
- Use trash cans to dispose of all waste.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
 - Feeding the wildlife.
 - Allowing your pet in the water.
 - Fishing except where posted.
 - Entering the water, swimming, or wading.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

Waterfront (including Marina)

- Park hours are from 5am to 10pm, except by permitted use
- Dogs must be on a leash and handlers must clean up after their pet
- Use trash cans to dispose of all waste.
- Park rules prohibit:
 - Amplified sound, except by permitted use.
 - Alcoholic beverages.
 - Vehicles except in designated parking areas.
 - Camping or using the park as living accommodations.
 - Skateboards, roller skates or roller blades.
 - Riding or operating any bicycle or micromobility device per section 10-1-1.
 - Commercial activity, except by permitted use.
 - Fishing except where posted.

Use of this park is subject to the Alexandria City Code, including, but not limited to section 6-1-8. For non-emergency police assistance, call 703.746.4444. For General recreation information, call 703.746.4343 or visit www.alexandriava.gov/recreation.

NATURE TRAIL SIGN

Purpose

The nature trail sign is a weather and vandal resistant sign for communicating the natural surroundings and wildlife elements.

General Information

Signs shall be located along trails and paths in locations that effectively communicate in relationship to the site context.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign shall be 1/8 inch thick aluminum with an attached aluminum backer plate.

Sign backboards shall be 12 inches vertical dimension by 12 inches horizontal dimension.

Sign finish shall be matte laminate. Signs shall have a UV and vandal resistant protective coating.

Sign may have optional aluminum frame.

Installation

Install method #1: Signs shall be post mounted on a 1 inch square aluminum post at ground level adjacent finish grade and level. Sign shall be placed on a 30 degree angle.

Install method #2: Signs shall be mounted on a 2 1/2 inch square aluminum post. Signs shall be mounted 36 inches vertical distance from the bottom of the sign to adjacent finish grade and level. Sign and post shall be placed on a 30 degree angle.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Nature Trail Sign

Intentionally Blank

STORMWATER SIGN

Purpose

The stormwater sign is a weather and vandal resistant sign for communicating information regarding stormwater facilities.

General Information

Signs shall be located in a central/prominent location.

Materials and Finish

Sign shall be 1/8 inch thick aluminum.

Sign shall be 12 inches minimum vertical dimension by 18 inches minimum horizontal dimension. Corners shall have 1.5 inch radius.

Sign finish shall be matte laminate.

Sign background shall be PMS 299 C.

Installation

Sign shall be mounted on a 2½ inch square single aluminum post or U channel post.

Sign height shall be field verified and approved by the director of Transportation and Environmental Services.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Stormwater Sign

Intentionally Blank

TYPE A | PARK WAYFINDING SIGN

Purpose

Sign Type A is a weather and vandal resistant sign for communicating park name information.

General Information

Sign shall be located in a central/prominent location at park vehicular entry.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

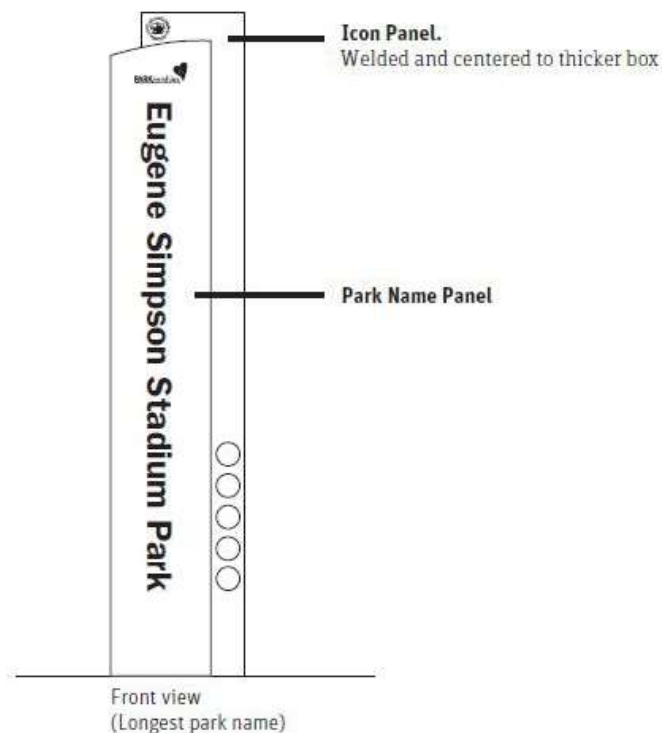
Installation

Sign cabinet shall be direct bury, plum and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type A Sign

Intentionally Blank

TYPE B SIGN

Purpose

Sign Type B - Informational Kiosk is a weather and vandal resistant sign for communicating park information.

General Information

Sign shall be located in a central/prominent location at park parking lots or park entry.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

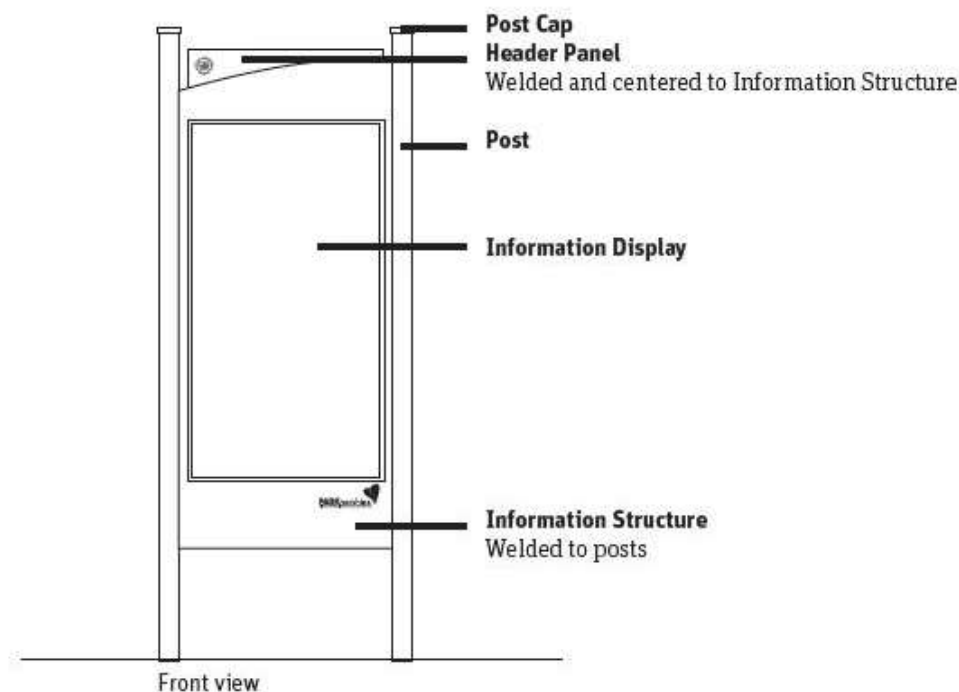
Installation

Sign shall be post mounted and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type B Sign

Intentionally Blank

TYPE C SIGN

Purpose

Sign Type C - Parking Lot Arrival Sign is a weather and vandal resistant sign for communicating park information.

General Information

Sign shall be located in a central/prominent location at park parking lots.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

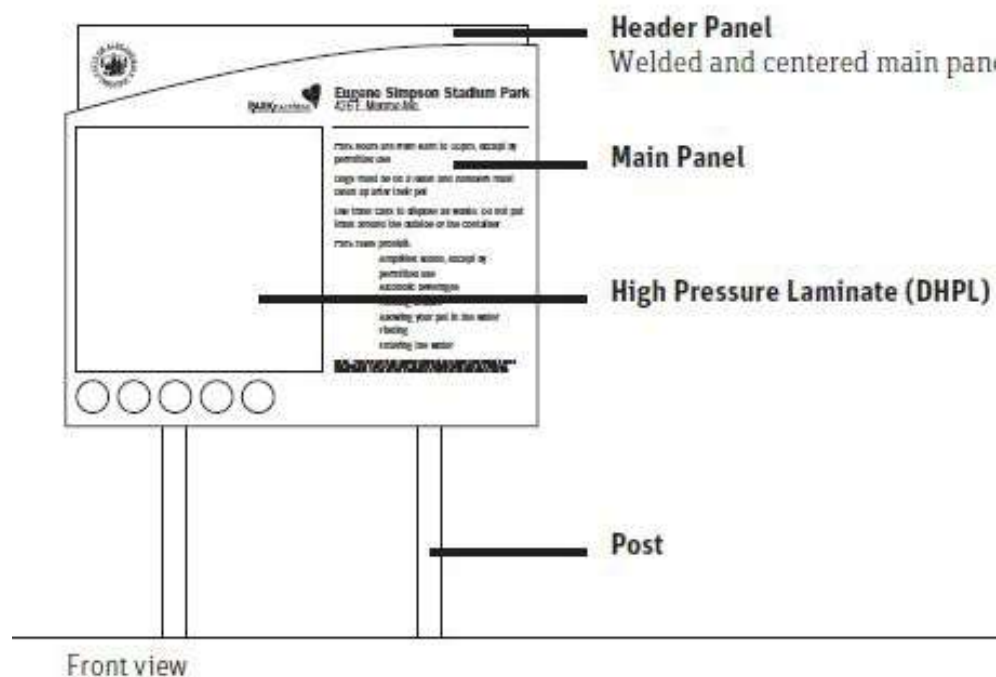
Installation

Sign shall be post mounted and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type C Sign

Intentionally Blank

TYPE D SIGN

Purpose

Sign Type D - Pedestrian Information is a weather and vandal resistant sign for communicating park information.

General Information

Sign shall be located in a central/prominent location at trail entry.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Sign housing shall be aluminum.

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

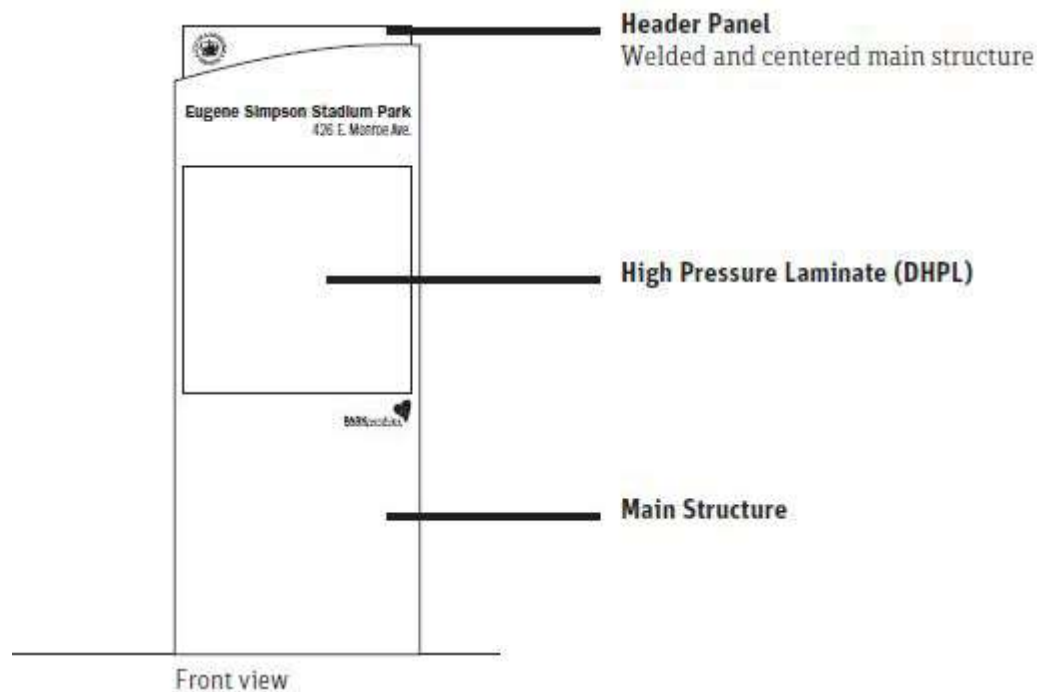
Installation

Sign housing shall be direct bury, plum and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type D Sign

Intentionally Blank

TYPE E SIGN

09

Purpose

Sign Type E - Trail Map is a weather and vandal resistant sign for communicating park location.

General Information

Sign shall be located in a central/prominent location at trail entry.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

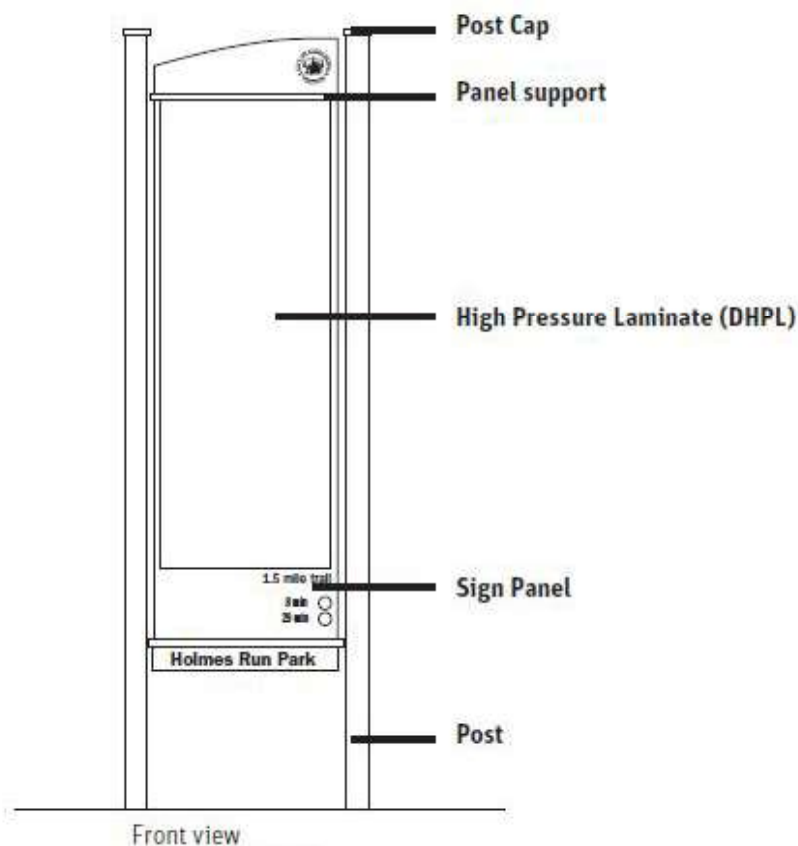
Installation

Sign shall be post mounted and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type E Sign

Intentionally Blank

TYPE F SIGN

Purpose

Sign Type F - Rules and Regulations is a weather and vandal resistant sign for communicating park location.

General Information

Sign shall be located in a central/prominent location at park entry, field entry, court entry, or playground entry.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

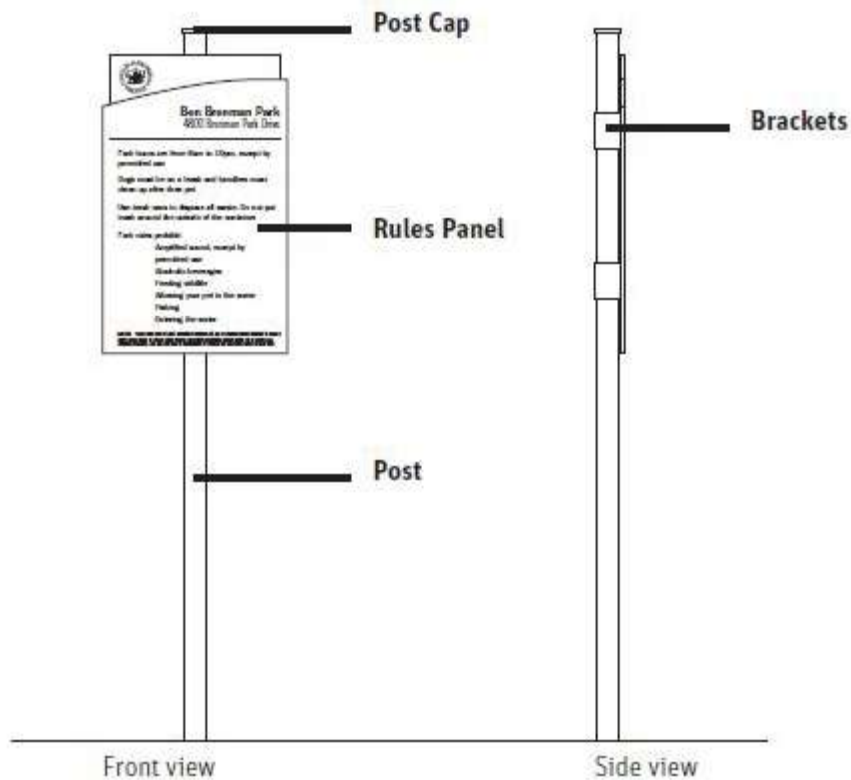
Installation

Sign shall be post mounted and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Type F Sign

Intentionally Blank

TYPE G SIGN

Purpose

Sign Type G - Place marker is a weather and vandal resistant sign for communicating park locations and boundaries.

General Information

Sign shall be located at park boundaries.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

Post shall be 4 inch square aluminum, capped at top.

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

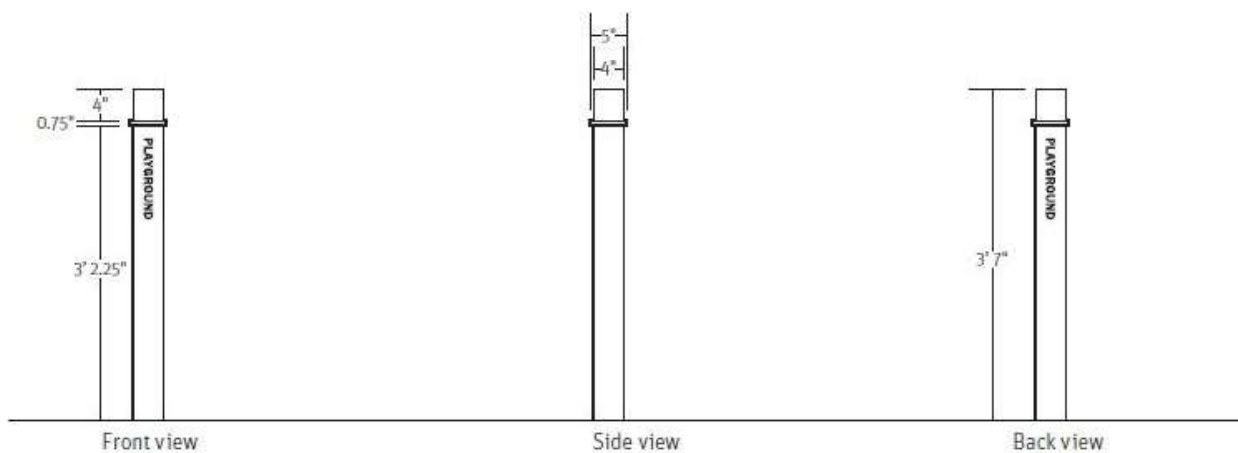
Installation

Sign post shall be direct buried, plum and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Intentionally Blank

TYPE H SIGN

Purpose

Sign Type H - Interpretative Sign is a weather and vandal resistant sign for communicating historical or environmental information.

General Information

Sign shall be located in a central/prominent location with historical or environmental context.

For additional sign information, see Parks' Wayfinding Strategy, Design Intent Document.

Materials and Finish

See Parks' Wayfinding Strategy, Design Intent Document for materials and finishes.

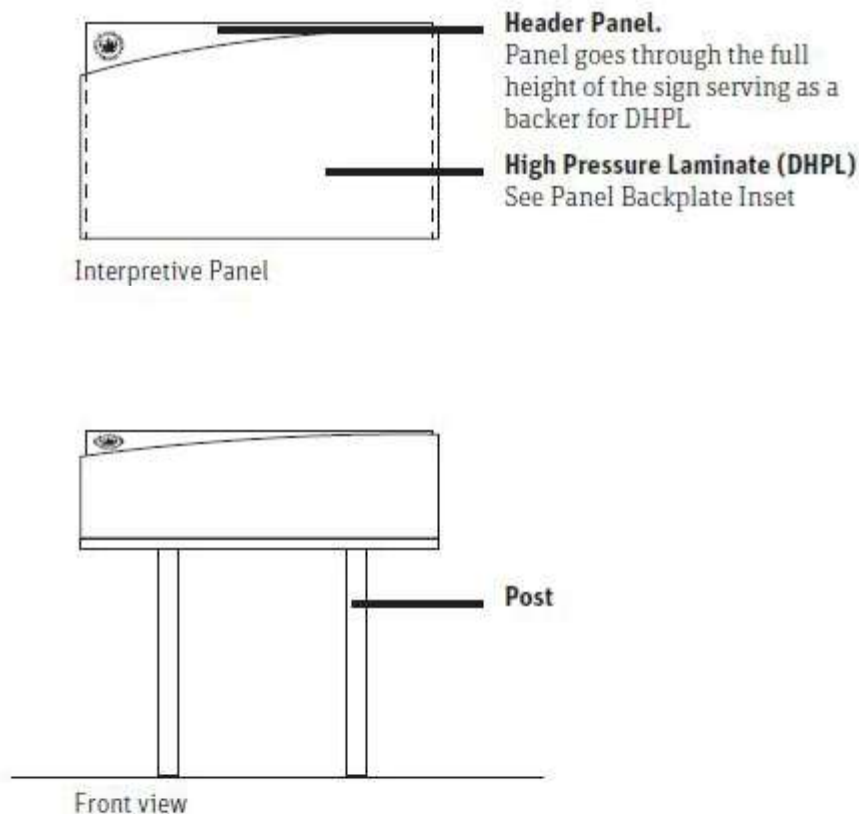
Installation

Sign shall be post mounted and level. Foundation per local codes.

Life Cycle Expectations

A 1 year minimum warranty is required.

Signs are anticipated to require replacement after 10 years based on normal and ordinary use.



Intentionally Blank

TOY REMOVAL SIGN

Purpose

Toy removal shall be posted at park playground sites where loose toys are present.

General Information

Signs shall clearly state toy policy and the City of Alexandria as the park operator.

Signs shall be posted in unobstructed viewsheds near activity centers or park entrances.

Materials and Finish

Sign shall be corrugated plastic.

Sign Finish shall be matte laminate.

Sign graphics, colors and fonts shall coordinate with the City of Alexandria Wayfinding Program.

Installation

Signs shall be temporarily affixed to fences or attached to a temporary post.

Signs shall not be posted at a height greater than 40 inches from finish grade to the center of the sign board.

Features

Signs shall not vary from the policy provided by the Director of Recreation, Parks and Cultural Activities.

Signs shall use Forest Green (Pantone 560) in the frame.

Sign frame font shall be FF Unit Medium.

Sign information font shall be Whitney Medium.

Signs shall be 11 by 17 in size.

Signs shall be oriented in a landscape direction.

Life Cycle Expectations

Signs are anticipated to require replacement based on normal and ordinary wear.



Toy Removal Sign

Intentionally Blank

WAYFINDING PARK SIGN SYSTEM

Purpose

The City of Alexandria Wayfinding sign package shall be used for all park identification. Implementation shall be coordinated with the Department of Transportation and Environmental Services (T&ES) and the City of Alexandria Wayfinding Design Guidelines Manual and the Wayfinding Technical Manual.

General Information

The following signs shall be consistent with the guidelines identified by the Wayfinding Plan including park entrance and identification, interpretive panels, automotive trail blazing and pedestrian/bike trail signs.

Signs may require City of Alexandria sign and building permits.

Signs can be single or double sided.

Related standards: Lighting | Ground Recessed.

Materials and Finish

Park identification signs shall be the DI.2 Single Post Large Destination Identification sign, the DI.2a Single Post Small Destination Identification Sign, the DI.3 Double Post Destination Identification sign or the DI.3 Modified Sign.

Installation

Duplicate/old signs shall be removed from parks.

Signs shall be installed close to trail heads, entrance drives and pedestrian trails. Signage shall not hang into pathways or impede mobility devices.

Life Cycle Expectations

A workmanship warranty of 5 years minimum is required.

Signs are anticipated to require replacement after 15-20 years based on normal and ordinary use.



Park sign

WAYFINDING PARK SIGN SYSTEM

Colors and Finishes

Colors and finishes have been selected from a range of high-quality, industry-standard sources and are readily available to fabricators and end-users alike. The color swatches shown in these standards are for illustrative purposes only and should not be used for color proofing - all color matching should be done with physical samples, in the form of color chips and vinyl sample sheets.

Color specifications are indicated in the following hierarchy:

Color Name (Color Reference for Text)

Paint (P#)

Opaque Vinyl (OV#)

Reflective Vinyl (RV#)

Translucent Vinyl (TV#)

Hi-Intensity Vinyl (HV#)

High Resolution Digital Printing (D#)

Not all colors require the full range of film (vinyl) and paint equivalents.

Paint and vinyl have been sourced from the following manufacturers:

Paints:

Map (Matthews Paint Company)

www.matthewspaint.com

Akzo Nobel Sign Finishes

www.signfinishes.com

Vinyl Films:

3M

www.3M.com/graphics

Avery Graphics

www.averygraphics.com

Arlon

www.arlong.com



Forrest Green

P15: MP13508

D15: Pantone 560



Sage Green

P14: MP13544

D14: Pantone 5565C



Buckskin

P27:MP07645

OV27: Avery A9270-O

D27: Pantone DS 41-6 C



Dark Taupe

P3: Akzo-Nobel 425D1

OV3: Avery A9252-O

D3: Pantone 466C



Jet Black

P2: MAP 37092

OV2: 3M 7725-12

TV2:3630-22



Rose

P16:MP07276

D16: Pantone 696C

WAYFINDING PARK SIGN SYSTEM

Type Standards

The palette of fonts developed for the sign standards respond to the varying needs of legibility and aesthetics, and can be grouped into the following broad categories:

Wayfinding and Legibility

- FHWA Series 2000 (TF1)
- FF Unit Medium (TF2)

Secondary Text

- Aviano Sans Regular (used for Alexandria logotype)
- Electra Family (used for interpretive text) (TF5, TF5A, TF4B)
- Whitney Family (used for interpretive text) (TF4, TF4A, TF4B, TF4C, TF4D, TF4E, TF4G, TF4H)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF1 | FHWA Series 2000 C | www.fhwa.org | 866.833.7933

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF2 | FF Unit Medium | www.fontfont.com | 888.333.6687

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890:.,()!?

TF3 | Aviano Sans Regular | www.insignedesign.com | 865.730.0877

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890:.,()!?

TF4 | Whitney Light Small Caps | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4A | Whitney Light Italic | www.typography.com | 212.777.6640

Type standards

WAYFINDING PARK SIGN SYSTEM

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4B | Whitney Book Italic | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4C | Whitney Medium | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890:.,()!?

TF4D | Whitney Medium Small Caps | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890:.,()!?

TF4E | Whitney Semi Bold Small Caps | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4F | Whitney Semi Bold Italic | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4G | Whitney Bold | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF4H | Whitney Black | www.typography.com | 212.777.6640

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF5 | Electra LT Std Regular | www.linotype.com | +49 (0) 6172 484-418

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF5A | Electra LT Std Bold | www.linotype.com | +49 (0) 6172 484-418

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:.,()!?

TF5B | Electra LT Std Cursive | www.linotype.com | +49 (0) 6172 484-418

WAYFINDING PARK SIGN SYSTEM



Primary City Logotype



Trail Logomarks



WAYFINDING PARK SIGN SYSTEM

Small Single Post Details

Finial: Fabricated aluminum finial tapers from 4 inches at bottom to 2 inches at top across 6 $\frac{5}{8}$ inch length P2 mechanically fastened to reveal plate.

Reveal: $\frac{3}{8}$ inch exposed plate inset $\frac{3}{4}$ inch from outside of post painted D15, attached to post with plug welds, ground smooth.

Cross Bar: 1 inch thick by 2 $\frac{1}{2}$ inch wide aluminum flat bar or aluminum rectangular tube P2 welded to post.

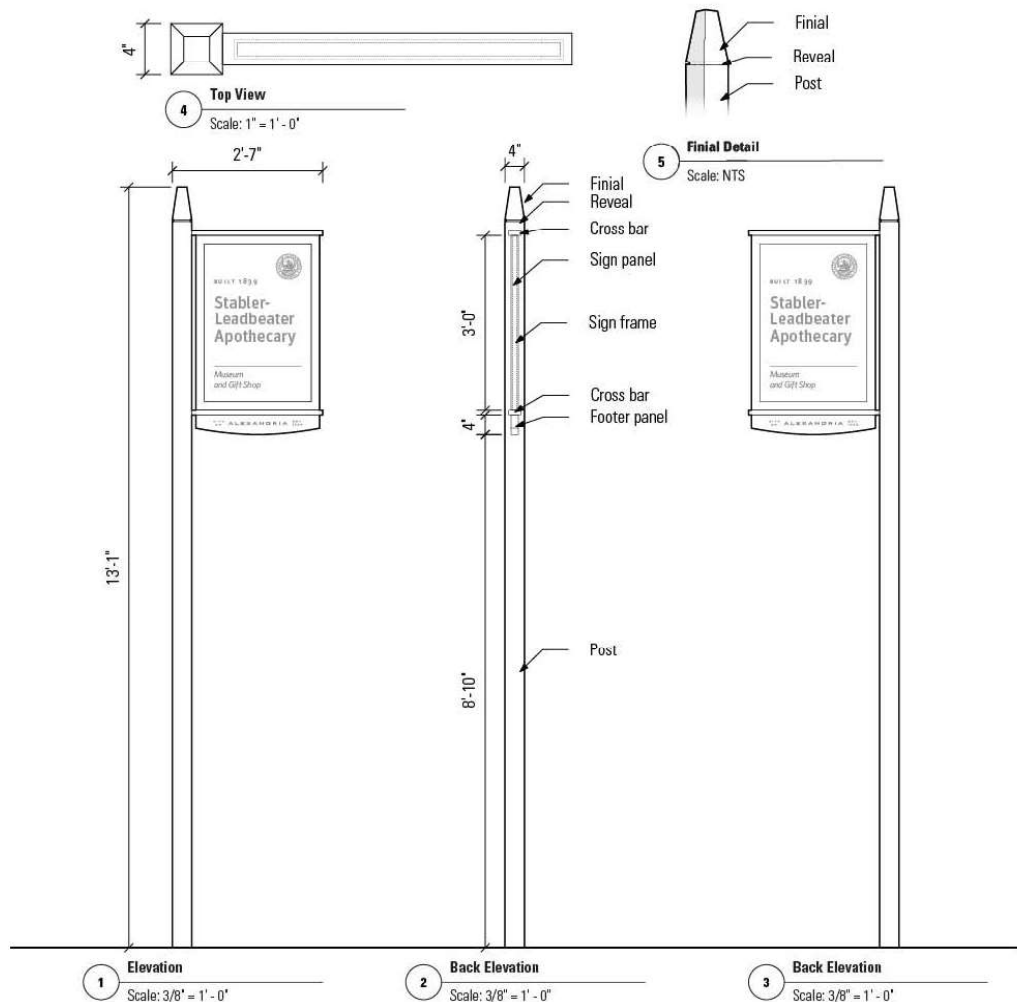
Sign Panels: Two $\frac{1}{16}$ inch thick aluminum panels inserted into fram from the side. Color D15 with applied vinyl graphics.

Frame: 1 $\frac{1}{2}$ inch deep by 1 $\frac{3}{4}$ inch wide by $\frac{1}{4}$ inch thick square corner angle painted P14, with inside frame return painted P16. Internal structure as required to support two sign panels that slide in from the outside edge.

Footer Panel: 1 $\frac{1}{2}$ inch deep fabricated aluminum panel painted P2, with P3 "Alexandria" and P27 "City of & Est. 1749".

Post: 4 inch square aluminum post painted P2.

Baseplate/Footing: Below-grade baseplate with stainless steel anchor bolts set into poured in place concrete footing.



Park sign - single post - small

WAYFINDING PARK SIGN SYSTEM

Small Single Post Details

Frame: 1¾ inch painted aluminum frame, color P14. Inside frame return painted as accent color, P16.

Seal/Logo Field: 5¼ inch by 5¼ inch square field for seal/logo artwork as supplied by entity. Seal/logo masked and sprayed color D14. Located 2 inches from top and right of visible sign panel aligned to top right of box.

Supplemental Text A: Color OV3, ¾ inch cap height TF4D set in lower case (height based on lowercase E) optically spaced and tracked +180 em in Adobe Illustrator. Located ¾ inch below seal.

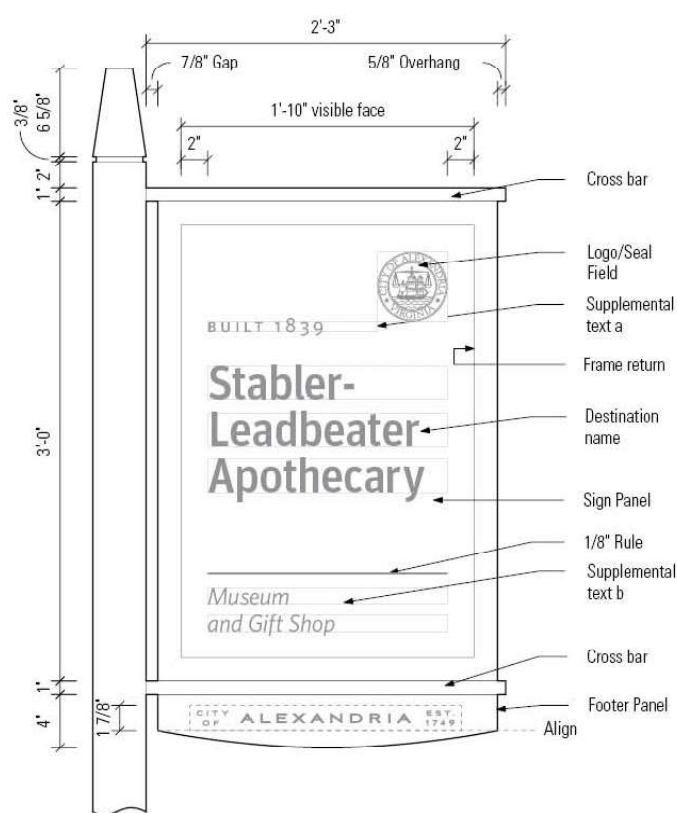
Destination Name Grid A: Color OV1 2½ inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 3½ inch line spacing.

Destination Name Grid B: Color OV1 2¾ inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 3½ inch line spacing.

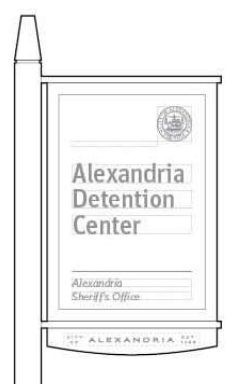
Destination Name Grid C: Color OV1 3 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 4½ inch line spacing.

Supplemental Text B Grid A/B: Color OV3 1¼ inch cap height on 2½ line spacing TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 1 inch below OV3, ¼ inch rule.

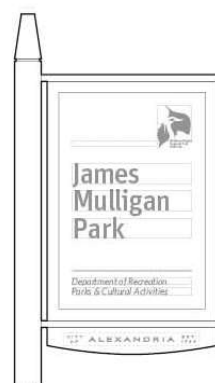
Supplemental Text B Grid C: Color OV3 1 inch cap height on 1½ line spacing TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 1 inch below OV3, ¼ inch rule.



6 Graphic Grid
Scale: 1" = 1' - 0"



7 Graphic Grid B
Scale: 1/2" = 1' - 0"



8 Graphic Grid C
Scale: 1/2" = 1' - 0"

Park sign - single post - small

WAYFINDING PARK SIGN SYSTEM

Large Single Post Details

Finial: Fabricated aluminum finial tapers from 4 inches at bottom to 2 inches at top across 6 $\frac{5}{8}$ inch length P2 mechanically fastened to reveal plate.

Reveal: $\frac{3}{8}$ inch exposed plate inset 314 inch from outside of post painted D15, attached to post with plug welds, ground smooth.

Cross Bar: 1 inch thick by 2 $\frac{1}{2}$ inch wide aluminum flat bar or aluminum rectangular tube P2 welded to post.

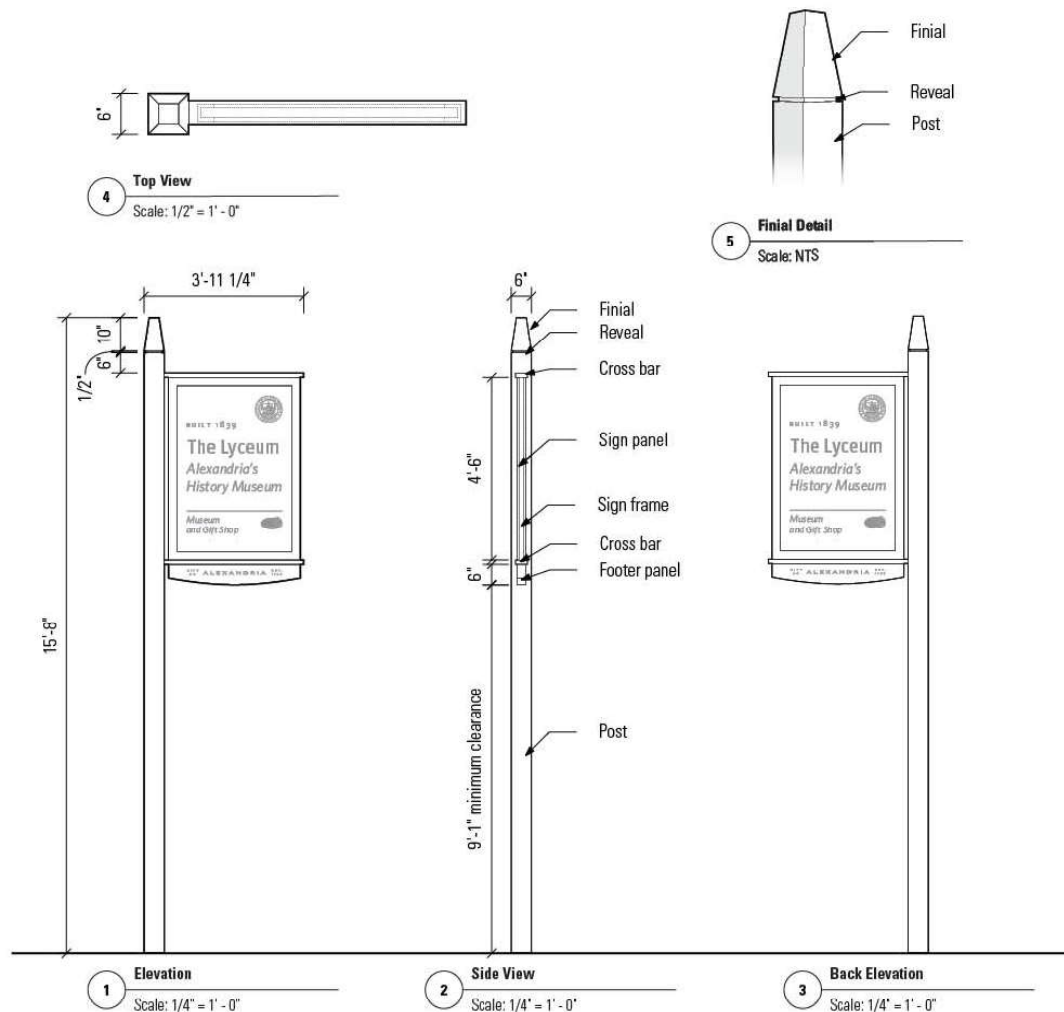
Sign Panels: Two $\frac{1}{16}$ inch thick aluminum panels inserted into fram from the side. Color D15 with applied vinyl graphics.

Frame: 1 $\frac{1}{2}$ inch deep by 1 $\frac{3}{4}$ inch wide by $\frac{1}{4}$ inch thick square corner angle painted P14, with inside frame return painted P16. Internal structure as required to support two sign panels that slide in from the outside edge.

Footer Panel: 1 $\frac{1}{2}$ inch deep fabricated aluminum panel painted P2, with P3 "Alexandria" and P27 "City of & Est. 1749".

Post: 4 inch square aluminum post painted P2.

Baseplate/Footing: Below-grade baseplate with stainless steel anchor bolts set into poured in place concrete footing.



Park sign - single post - large

WAYFINDING PARK SIGN SYSTEM

Large Single Post Details

Frame: 2½ inch painted aluminum frame, color P14. Inside frame return painted as accent color, P16.

Seal/Logo Field: 8 inch by 8 inch square field for seal/logo artwork as supplied by City. Seal/logo masked and sprayed color D14. Located 1½ inches from top and right of visible sign panel aligned to top right of box.

Supplemental Text A: Color OV3, 1¼ inch cap height TF4D set in lower case (height based on lowercase E) optically spaced and tracked +180 em in Adobe Illustrator. Located 1¼ inch below seal.

Destination Name Grid A: Color OV1 4 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 5¾ inch line spacing.

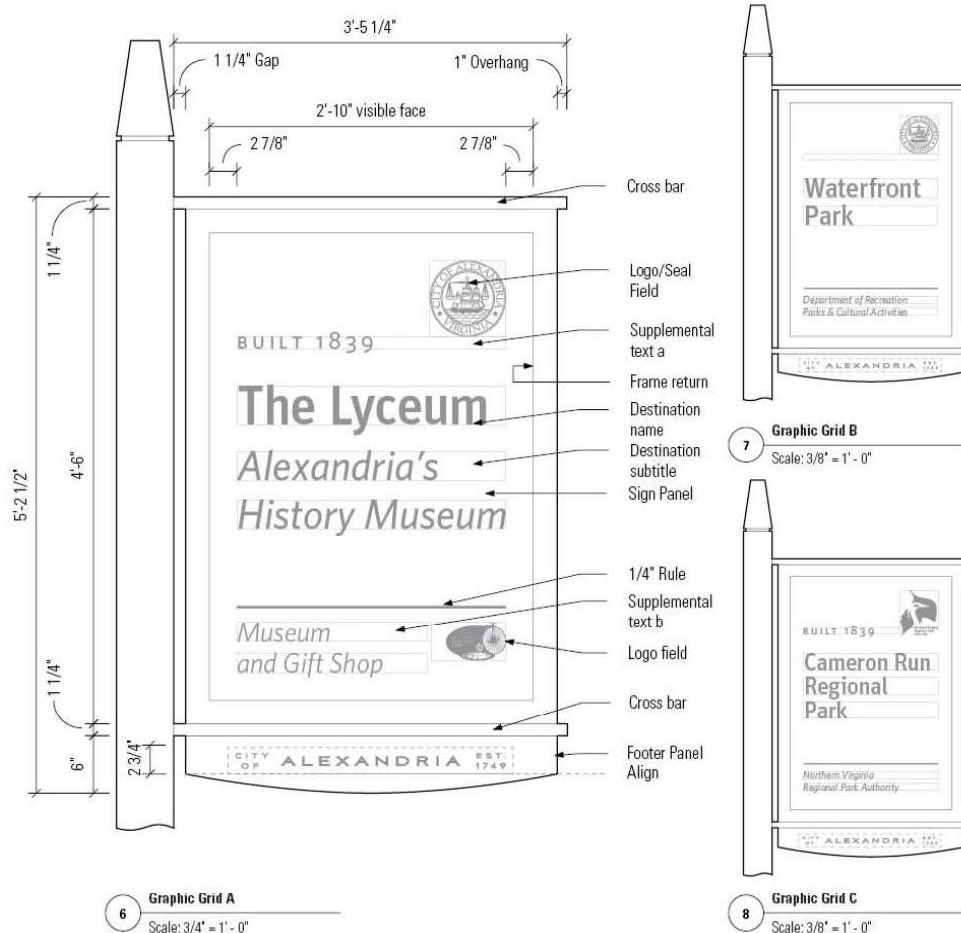
Destination Name Grid B: Color OV1 4 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 5¾ inch line spacing.

Destination Name Grid C: Color OV1 3½ inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 5 inch line spacing.

Destination Subtitle: Color OV1 3 inch, TF4B optically spaced and tracked +10 em in Adobe Illustrator.

Supplemental Text B Grid A/B: Color OV3 1¼ inch cap height on 3¼ line spacing TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 1 inch below Color OV3, ¼ inch rule.

Supplemental Text B Grid C: Color OV3 1¼ inch cap height on 2½ line spacing TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 1½ inch below Color OV3, ¼ inch rule.



Park sign - single post - large

WAYFINDING PARK SIGN SYSTEM

Large Double Post Details

Post Cap: 5½ inch square by 1 inch aluminum plate welded to post, all welds ground smooth.

Cross Bar: 1½ inch thick by 3 inch wide aluminum flat bar or aluminum rectangular tube P2 welded to post.

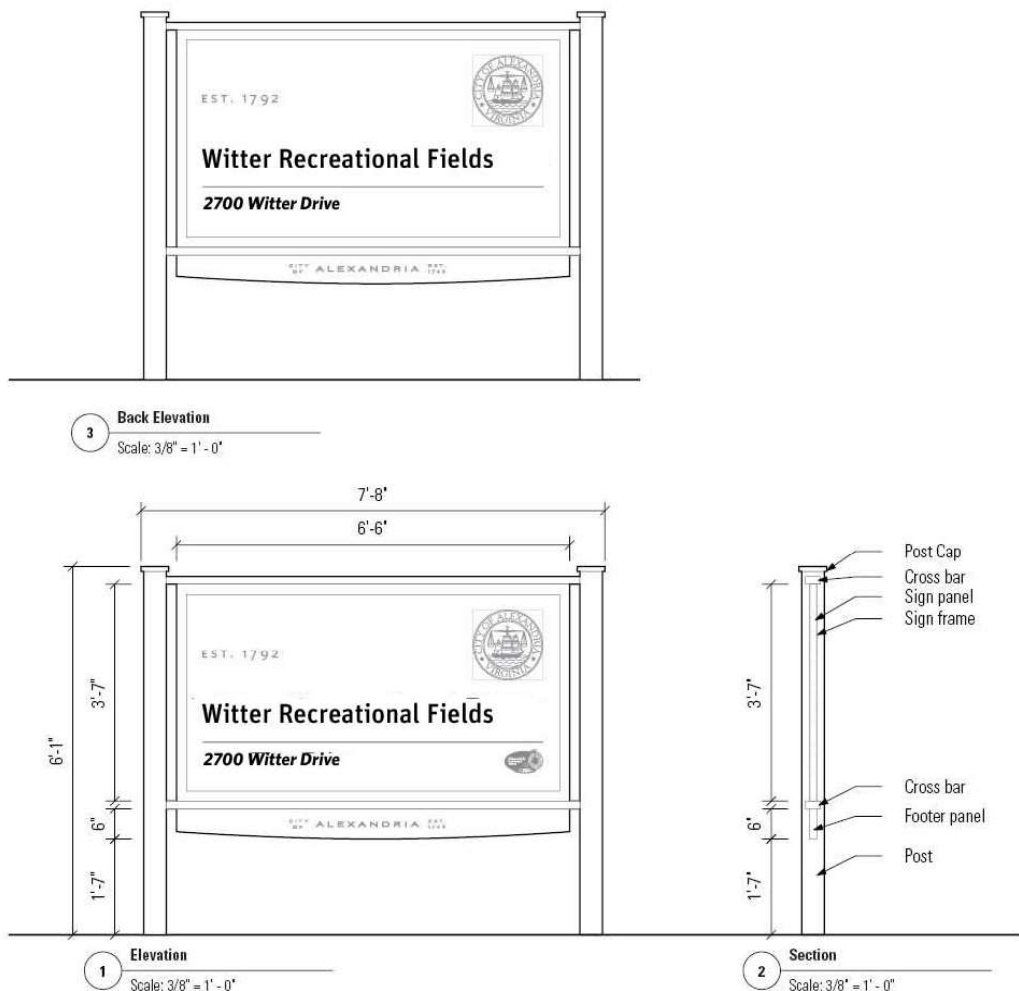
Sign Panels: Two ¼ inch thick aluminum panels inserted into frame from the top. Color D15 with applied vinyl graphics.

Frame: 1½ inch deep by 1½ inch wide by ½ inch thick square corner angle painted P14, with inside frame return painted P16. Internal structure as required to support two sign panels that slide in from the top.

Footer Panel: 1½ inch deep fabricated aluminum panel painted P2, with P3 "Alexandria" and P27 "City of & Est. 1749".

Post: 4½ inch square aluminum post painted P2.

Baseplate/Footing: Below-grade baseplate with stainless steel anchor bolts set into poured in place concrete footing.



Park sign - double post

WAYFINDING PARK SIGN SYSTEM

09

Large Double Post Details

Frame: 1½ inch painted aluminum frame, color P14. Inside frame return painted as accent color, P16.

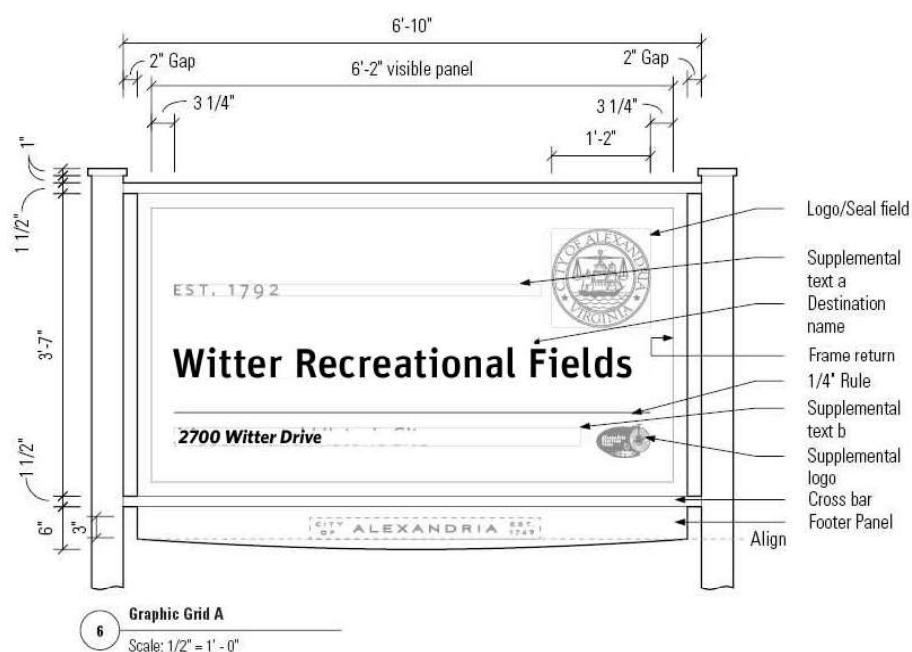
Seal/Logo Field: 1 inch to 2 inches by 1 inch to 2 inches square field for seal/logo artwork as supplied by City. Seal/logo masked and sprayed color D14. Located 3 inches from top and right of visible sign panel aligned to top right of box.

Supplemental Text A: Color OV3, 1½ inch cap height TF4D set in lower case (height based on lowercase E) optically spaced and tracked +180 em in Adobe Illustrator. Located 4½ inch below seal.

Destination Name Grid A: Color OV1 6 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator.

Destination Name Grid B/C: Color OV1 5 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 7¼ inch line spacing.

Supplemental Text B Grid A/B/C: Color OV3 5 inch cap height TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 2 inch below Color OV3, ¼ inch rule.



Park sign - double post

WAYFINDING PARK SIGN SYSTEM

Small Double Post Details

Post Cap: 5½ inch square by 1 inch aluminum plate welded to post, all welds ground smooth.

Cross Bar: 1½ inch thick by 3 inch wide aluminum flat bar or aluminum rectangular tube P2 welded to post.

Sign Panels: Two ¼ inch thick aluminum panels inserted into frame from the top. Color D15 with applied vinyl graphics.

Frame: 1½ inch deep by 1½ inch wide by ½ inch thick square corner angle painted P14, with inside frame return painted P16. Internal structure as required to support two sign panels that slide in from the top.

Footer Panel: 1½ inch deep fabricated aluminum panel painted P2, with P3 "Alexandria" and P27 "City of & Est. 1749".

Post: 4½ inch square aluminum post painted P2.

Baseplate/Footing: Below-grade baseplate with stainless steel anchor bolts set into poured in place concrete footing.

WAYFINDING PARK SIGN SYSTEM

Small Double Post Details

Frame: 1½ inch painted aluminum frame, color P14. Inside frame return painted as accent color, P16.

Seal/Logo Field: 1 inch to 2 inches by 1 inch to 2 inches square field for seal/logo artwork as supplied by City. Seal/logo masked and sprayed color D14. Located 3 inches from top and right of visible sign panel aligned to top right of box.

Supplemental Text A: Color OV3, 1½ inch cap height TF4D set in lower case (height based on lowercase E) optically spaced and tracked +180 em in Adobe Illustrator. Located 4½ inch below seal.

Destination Name Grid A: Color OV1 6 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator.

Destination Name Grid B/C: Color OV1 5 inch cap height, TF2 optically spaced and tracked -25 em in Adobe Illustrator set on 7¼ inch line spacing.

Supplemental Text B Grid A/B/C: Color OV3 5 inch cap height TF4B optically spaced and tracked +10 em in Adobe Illustrator. Set 2 inch below Color OV3, ¼ inch rule.



Park sign - double post

Intentionally Blank

CHAPTER 10

MARINA AND WATERFRONT

Common Elements

Decks and Boardwalks

Marina Facilities

Maritime Lighting

Pilings

Promenade Light

Pump Out Station

Intentionally Blank

COMMON ELEMENTS

Purpose

The Alexandria Waterfront Common Elements Design Guidelines were developed by Olin and completed on September 7, 2016.

Common elements are the standard materials, fixtures, elements, and applications that unify the design and appearance of the Waterfront and set it within the context of Old Town.

The design elements shall be implemented with current and future projects at the Marina and Waterfront Locations.

General Information

Design guidelines for the common elements create standards for implementation of the Waterfront projects and are divided into three categories:

- Paving – colors and materials for streets, sidewalks, and the pedestrian promenade
- Lighting – consistent promenade lighting
- Art and history – historic shoreline and promenade banding that can display inscriptions related to Alexandria.

Materials and Finish

Materials, treatments, fabrication requirements and color requirements can be found in the Alexandria Waterfront Common Elements Design Guidelines.



**ALEXANDRIA WATERFRONT
COMMON ELEMENTS**

DESIGN GUIDELINES
SEPTEMBER 7, 2016



Design Guidelines Manual



Marina & Waterfront Concept by Olin

Intentionally Blank

DECKS AND BOARDWALKS

Purpose

Elevated structures, such as decks and boardwalks, shall be provided where water bodies, unstable ground conditions, elevation changes, or other site conditions impede access, or for elevated pathways over protected natural scenic areas.

General Information

Structures and foundations shall be designed with industry standard engineering practices and principles. Plans and shop drawings for structures shall be signed and sealed by a structural engineer registered and licensed to practice in the Commonwealth of Virginia.

Subsurface and hydrologic investigation shall be conducted by a geotechnical engineer licensed to practice in the Commonwealth of Virginia. Engineers shall utilize these reports in design of footings and foundations.

Elevated structures shall be ADA compliant, including railings and handrails, per local building codes.

Bridges located within the 100-year FEMA/FIRM floodplain shall comply with design and/or performance requirements required for floodplains.

Elevated structures shall meet the static and dynamic design loads specified for each project. Loads include but are not limited to dead load, live load, concentrated load, vehicle load, wind load and snow load. Structures shall be designed to accommodate lightweight construction equipment and vehicles.

Structures located on designated multi-modal trail routes shall comply with the most current Alexandria Bicycle Transportation and Multi-Use Trail Master Plan and VDOT trail specifications. Deck and boardwalks shall be ADA compliant.

Features

Walking surface of the deck shall have 6 feet minimum horizontal clear width.

Materials and Finish

Structural members shall be marine grade weathering steel, fiberglass, concrete or silicate impregnated lumber.

Decking shall be concrete, silicate impregnated lumber or composite resin, and slip resistant.

Wood materials shall be used on a limited basis. Wood materials shall be installed crown side up. High exterior grade hardwoods or silicate impregnated lumber shall be approved by the Director of Recreation, Parks and Cultural Activities.

Piling foundations shall be concrete or timber. Foundations shall slope to shed water.

Metal components shall be rust and corrosion resistant. Electrolytic corrosion resulting from dissimilar materials, metals and finishes shall be avoided.

Surfaces shall slope to shed water.

Installation

Structures shall be located along existing trails and paths when possible.

Approaches shall have a smooth transition and comply with current ADA standards.

Transitions shall not exceed ½ inch vertical dimensions. Where vertical dimensions are unavoidable, a transition plate of stainless or treated metal plate or transition shall be required.

Life Cycle Expectations

A 1 year minimum warranty is required on decking surfaces.

A structural warranty of 10 years minimum is required.

Decking is anticipated to require replacement after 8 years based on normal and ordinary use.

DECKS AND BOARDWALKS



Observation deck



Composite boardwalk

MARINA FACILITIES

Purpose

Marina facilities shall be safe, efficient, and inviting to visiting boaters, tourists and citizens while minimizing environmental impact to the Potomac River and Chesapeake Bay watersheds.

General Information

Facilities shall be designed and constructed by personnel specializing in marine/waterway design and construction.

Layout and design shall generally conform to the California Department of Boating and Waterways Layout and Design Guidelines for Marina Berthing Facilities, July 2005.

Designs shall allow for individual fixtures and accessory items to be readily replaced.

Restrooms and sanitary components shall comply with the Commonwealth of Virginia Sanitary Regulations for Marinas and Boat Moorings, as administered by the Virginia Department of Health.

Marinas shall incorporate best practices as detailed in the Virginia Clean Marina Guidebook.

Marinas shall comply with local and state permits regulating use and activity in Virginia Waterways, including but not limited to the Army Corps of Engineers, Virginia Marine Resources Commission, Virginia Department of Conservation and Recreation.

Marina facilities shall be ADA compliant. Guardrails and/or other barriers will be coordinated with Code Enforcement based on location and intended user activity.

Fire protection systems shall conform to the Virginia Statewide Fire Prevention Code.

Water safety systems shall be provided.

Construction may require the approval of the Alexandria Board of Architectural Review.

Related Standards: Park Structures, Site Furnishings, Surfacing, Signs, Utilities Systems.

Materials and Finish

Electrical components and devices shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

Electrical systems shall conform to NFPA 303 Fire Protection Standards for Marinas and Boatyards.

Water life safety materials shall be durable, easy to maintain and resistant to vandalism.

Metal components shall be rust and corrosion resistant. Electrolytic corrosion resulting from dissimilar materials, metals and finishes shall be avoided.

Signs shall be readable, durable and prominently displayed.



City Marina

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MARITIME LIGHTING

Purpose

Maritime lighting shall be provided for navigational marking, dock lighting and hazard marking. Lights include: Two Mile Lights, Blue Lights, One Mile Lights, and Pier Lights.

General Information

Electrical components and devices shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

Lights shall meet IALA-AISM guidelines and standards on marine lights and flash patterns.

Lighting systems shall include emergency lighting system and nightlight connections.

Lighting options shall include lens color, lamp color, and flash patterns.

The standard light fixture is manufactured by Carmanah, Model M502 or Model M650.

Light performance shall be visible at 2 nautical miles maximum.

Materials and Finish

Maritime lighting shall be waterproof, vibration proof and vandal proof.

Lights shall be solar powered LED lighting or energy saver rated. Lens shall be UV stabilized.

Lights shall include a function for battery operation.

Casing materials shall be UV-resistant and constructed from impact resistant polycarbonate.

Top of fixture shall be domed with self cleaning solar panels.

Bird deterrents shall be provided as needed.

Installation

Install lights according to manufacturer's recommendations.

Life Cycle Expectations

A product warranty of 5 years minimum is required.

Batteries are anticipated to require replacement after 5 years based on normal and ordinary use.

Bulbs and fixtures are anticipated to require replacement after 7 years based on normal and ordinary use.



Marina solar light

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PILINGS

10

Purpose

Pilings shall secure docks and vessels.

General Information

Piling shall be designed consistent with industry standard practices.

Piling load criteria shall be designed by a structural engineer registered and licensed to practice in the Commonwealth of Virginia.

Piling locations shall not obstruct navigation waters.

Pilings shall follow the rules for Use of Submerged Lands-Permitting, Dredging, and Construction, Subaqueous Guideline, VA Constitution Article XI.

Materials and Finish

Pile diameters shall be round, 1 foot minimum outside diameter.

Piling material shall be fiberglass composite, wood timber, or steel.

Fiberglass pilings shall have a wall thickness of .0375 inches minimum.

Piling finish shall be a PPT thermoplastic finish with UV inhibitors.

Piling color shall be brown or neutral color.

Piles shall have caps made of fiberglass or polyethylene, secured by galvanized or stainless steel hardware.

Piling shall be impact resistant.

Installation

Driving equipment shall minimize disturbance to submerged aquatic vegetation and animals. Pile driving requirement shall be determined by a structural and geotechnical engineer.

Required regulatory and building permits shall be obtained prior to installation.

Cut-off elevation of piles shall be determined by application, local conditions, design high water, design low water, weather data, and flood data. Generally, piles shall extend 4 feet minimum above docks and walkways.

Life Cycle Expectations

A product warranty of 10 years minimum is required.

Piles are anticipated to require replacement after 10 years based on normal and ordinary use.



Marina pilings

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PROMENADE LIGHT

10

Purpose

The promenade light shall be used to illuminate portions of the Marina and Waterfront Parks.

General Information

The promenade lights shall be installed per the Alexandria Waterfront Common Elements Design Guidelines were developed by Olin.

Lighting in POS zoned properties requires a Special Use Permit.

The standards light fixture is the Cooper ECM/EMM Epic Medium.

The standard pole is Structura Bol-T-16-70-40-S4-C7-ARM/1GFCI-MOD, or City approved equal.

Materials and Finish

The fixture shall be finished with polyester powder coat paint. Color shall be black.

The post material shall be a laminated Accoya Pole (Color =S4 -IPE) and aluminum anchor base shall be black.

Light poles/fixtures/luminaires shall be 16 feet total height from finished grade and installed with an anchor base.

Lamps shall be LED.

Features

Light fixtures that require separate ballast boxes are not permitted.

Light fixture can be configured with one or two luminaires.

Color temperature shall be between 3,000K and 4,000K.

Light fixtures shall have an option for motion activated automatic dimming/brighting.

Installation

Light poles shall be located so as not to be in conflict with vegetation or plantings.

Lights shall be located a minimum of 3 feet from the edge of all shared-use paths or pedestrian walkways.

Light pole foundations shall be flush to finished grade. Top of footing shall be sloped to shed water.

Connections installed beneath paving shall be sleeved.

Installation work shall be performed in conformity with USBC.

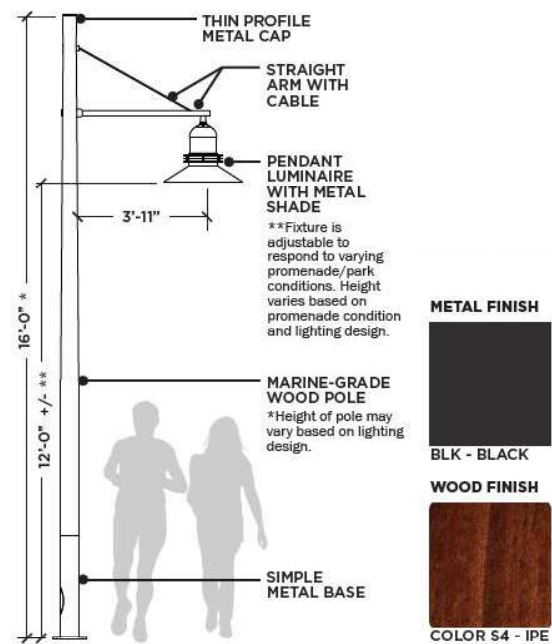
Lights shall have photocell and time clock activation.

Life Cycle Expectations

A 5 year minimum warranty is required on street pole light fixtures.

A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.



Promenade Light

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PUMP OUT STATION

10

Purpose

Pump out stations shall be provided to remove sewage from on-board marine sanitation devices.

General Information

Pump out stations shall meet Chapter 570 Commonwealth of Virginia Sanitary Regulations for Marinas and Boat Moorings, Section 270.

The standard vacuum pump out station is manufactured by Edson International, Model 210-2210 Series.

The pump out station shall have a 10 gpm minimum capacity.

Pump type shall be diaphragm or centrifugal power.

Motor shall be electric.

Suction and discharge opening size shall be regulated.

Pump out facilities shall include equipment for rinsing boat holding tanks. Backflow preventers shall be installed on the water service line when potable water is used.

Installation

Pump locations shall be connected to approved discharge lines.

Pump out locations shall be fixed and not portable.

Locations shall be convenient to boat slips.

Life Cycle Expectations

A product warranty of 2 years minimum is required.

Diaphragms and valves are anticipated to require replacement after 5 years based on normal and ordinary use.

Pump out stations are anticipated to require replacement after 10 years based on normal and ordinary use.



Pump out station



Department of Recreation,
Parks and Cultural Activities